THE LANCET.

A Journal of British and Foreign Medicine, Surgery, Obstetrics, Physiology, Chemistry, Pharmacology, Public Health, and News.

TELEGRAPHIC ADDRESS—LANCET, WESTRAND LONDON TELEPHONE NUMBER—GERRARD 5356

No. XII. OF VOL. I., 1913.
No. 4673. Vol. CLXXXIV. LONDON, SATURDAY, MARCH 22, 1913. Pp. 144—Price 6d.

ROYAL SOCIETY OF MEDICINE.

1, WIMPOLE STREET.

For DIARY of MEETINGS see page 867.

By FREDERICK J. McCANN, M.D.Edin., F.R.C.S.Eng., Surgeon, Samaritan Free Hospital for Women, London, N.W.

CANCER OF THE WOMB: ITS SYMPTOMS, DIAGNOSIS, PROGNOSIS, AND TREATMENT. Fully illustrated. 20s. net.

LIVERPOOL MEDICO-CHIRURGICAL JOURNAL.—"Cancer of the Womb, by F. J. McCann, is a book that can be recommended alike to the general practitioner and the specialist. Written in a fluent manner, it embodies the ripe experience of a renowned operator, trained observer, and patient investigator."

EDINBURGH MEDICAL JOURNAL.—"The book is one of very great merit; it will be read with interest both by the specialist and general practitioner as an authoritative exposition of the important subject with which it deals."

PRACTITIONER.—"Dr. McCann has produced a valuable work which deserves to be widely known."

ST. BARTHOLOMEW'S HOSPITAL JOURNAL.—"The plates are excellent. This is a book we can thoroughly recommend."

London: Henry Frowde and Hodder & Stoughton.

Just Published. With Plates. 12s. 6d. net.

BY HERBERT J. PATERSON, M.C., M.B.(Cantab.), F.R.C.S.

THE SURGERY OF THE STOMACH:
A Handbook of Diagnosis and Treatment.

James Nisbet & Co.

Just Published.

Fourth Edition, with 57 Illustrations, including numerous original Photo-micrographs. 10s. 6d. net.

THE NUTRITION OF THE INFANT.

By RALPH VINCENT, M.D.

London: Baillière, Tindall & Cox, 8, Henrietta-street, Covent Garden.

BY E. HURRY FENWICK, F.R.C.S.,

Professor of Urology at the London Hospital.

President Second Congress of International Association of Urology.

With 80 Plates and 15 Text-Figures. 10s. 6d. net.

THE VALUE of RADIOGRAPHY in the DIAGNOSIS & TREATMENT of URINARY STONE.

A Study in Clinical and Operative Surgery.

London: J. & A. Churchill, 7, Great Marlborough-street.

WORKS by Dr. HARRY CAMPBELL.

HEADACHE, ETC.
FLUSHING AND MORBID BLUSHING.
DIFFERENCES IN THE NERVOUS ORGANISATION OF MAN AND WOMAN.
H. K. Lewis.

ON TREATMENT. Third Impression.
Baillière, Tindall.

BY C. MANSELL MOULLIN, M.D. Oxon., F.R.C.S., Consulting Surgeon to the London Hospital.

Fourth Edition. Just Ready.

ENLARGEMENT of the PROSTATE. Price 6s.

THE BIOLOGY OF TUMOURS, BRADSHAW LECTURE, 1912. Price 2s.

London: H. K. Lewis, 136, Gower-street.

WHEN to OPERATE in INFLAMMATION of the APPENDIX. Third Edition now ready. Price 2s. 6d.

London: J. Bale & Danielsson Ltd., 83-89, Gt. Titchfield-street.

LEWIS'S CIRCULATING LIBRARY

ALL BRANCHES of MEDICAL and SCIENTIFIC LITERATURE.

Telephone, Central 10721.

Annual Subscription from One Guinea.

EASTER HOLIDAYS, 1913.

March 21st to 24th inclusive.

London: H. K. Lewis, Bookseller, 136, Gower-street, W.C.

6 Plates and 38 Illustrations. Crown 8vo. 7s. net; post free, 7s. 4d.; abroad, 7s. 7d.

ANÆSTHETICS in DENTAL SURGERY
By FRANK COLEMAN, M.R.C.S., L.R.C.P., L.D.S., and HARVEY HILLIARD, L.R.C.P.

"We believe there is no better manual to meet the purpose for which it is designed."—THE LANCET.

London: H. K. Lewis, 136, Gower-street, W.C.

FROM THE PRESS OF

W. B. SAUNDERS COMPANY.

BOOKS ON DIAGNOSIS.

See Advertising Page 3.

THE INDICATIONS for WIDELY RESECTING the BLADDER WALLS in VESICAL GROWTH. With 4 Plates. Cloth, 3s. 6d. net.
By E. HURRY FENWICK, F.R.C.S., Professor of Urology at the London Hospital; Vice-President of International Society of Urology, and President to its Second Congress.
New Work.
London: Adlard & Son, Bartholomew-close.

Just Published. viii. + 280 pp. Price 5s. net.
With Original Photographs and 143 Special Prescriptions.

TREATMENT of DISEASES of the SKIN

BY KNOWSLEY SIBLEY, M.D. (CAMB.).

London: Edward Arnold, 41 & 43, Maddox-street, W.

By J. S. KELLETT SMITH, F.R.C.S.Eng.

LATERAL SPINAL CURVATURE AND FLAT FOOT, AND THEIR TREATMENT BY EXERCISES.

"We may say at once that he has carried out his idea admirably. ..... This is eminently a book suited for the general practitioner wishful to treat the slighter forms of scoliosis or pes planus."—LANCET.

5s. 6d. net. 82 Illustrations. Bristol: J. Wright & Sons, Ltd.

Just Published. Crown 8vo. Price 1s. net; by post, 1s. 1d.

THE NON-SURGICAL TREATMENT of DUODENAL ULCER. By GEORGE HERSCHELL, M.D.Lond.
London: H. J. Glaisher, 55 and 57, Wigmore-street, W.

New Work. Fully Illustrated. 10s. net.

BY P. LOCKHART MUMMERY, F.R.C.S.

DISEASES OF THE COLON AND THEIR SURGICAL TREATMENT.

Bristol: J. Wright & Sons, Ltd.
London: Simpkin, Marshall & Co., Ltd.

Third Edition. With 126 Illustrations. Price 14s. net.

DISEASES of the NOSE and THROAT.
By HERBERT TILLEY, B.S., F.R.C.S., Surgeon Ear & Throat Department, University College Hospital, London.

LANCET:—"It is clearly written, well illustrated, and readable, and is a book to which students and practitioners of medicine may turn with confidence."

BRITISH JOURNAL OF TUBERCULOSIS:—"An ideal manual for the practitioner. ..... The sections dealing with affections of the nose and its accessory cavities are particularly excellent and admirably illustrated. Tuberculosis of the larynx (section) is one of the best of its kind ever written."

H. K. Lewis, 136, Gower-street, London.

MIST. HEPATICA CONC. (HEWLETT'S)

COMPOSITION.—Ext. Cascaræ, Ext. Rhei, Jalapin, Podophyllin, Cocaluæ Hydrochlor., 1-12th gr. in each fluid drachm.

THIS excellent compound, first introduced as a general **aperient** and **cholagogue**, has now become a popular remedy, and attention has very recently been called to the value of the mixture, by various authorities, in that class of cases spoken of as Chronic Biliousness, in Catarrhal Jaundice, and in the Jaundice of simple Hepatic Torpor. The remedial value of the compound depends chiefly upon the power which it possesses in influencing the action of the liver and other glandular organs of the alimentary canal. The remedy would not seem to be indicated in Hepatitis with high fever, so much as in the more chronic form of the affection which ends in enlargement and induration of the organ. **In passive or habitual Congestion of the Liver, so frequently met with, it has been used with marked benefit.** Even in the early stages of cirrhosis, whilst the liver is still enlarged, the compound should be regularly given, as great benefit has been derived from its use.

In the treatment of acute or temporary constipation, frequently met with in the convalescence from acute disease, and in pregnancy, or in the constipation due to sedentary habits, to habitual overwork (especially of the nervous system), to a deficiency of intestinal secretion, and of peristalsis, and a paralytic state of the intestinal muscular fibres, the mixture can be prescribed with wonderful effect, positively curing cases that have resisted other remedies.

The Dose is from 10 to 60 minims, according to the age and condition of the patient. One drachm is a direct aperient, and is not accompanied by griping or tenesmus.

Packed for Dispensing only in 10-oz., 22-oz., 40-oz., and 90-oz. Bottles.

Please write: "Mist. Hepatica Conc. (HEWLETT'S)" to ensure obtaining this Preparation.

☞ Obtainable from all Wholesale Druggists and the leading Dispensing Chemists throughout the United Kingdom, India and the Colonies.

— OR DIRECT FROM —

C. J. HEWLETT & SON, Ltd.,

Wholesale and Export Druggists and Manufacturing Chemists,

35 to 42, CHARLOTTE STREET, LONDON, E.C.

MERGENTHEIM TABLETS.

The Sovereign natural Remedy in all cases of Constitutional Disorders like:

CONSTIPATION, GALL-STONES, KIDNEY STONES, GRAVEL, DIABETES, LIVER COMPLAINTS, and ALL GOUTY AILMENTS.

Analysed and recommended by world-famed scientists such as FRESENIUS, LIEBIG, KUSSMAUL, SCHEERER, &c., and for years proved and certified by clinical experiences made in the most sceptical manner by medical men of unquestionable authority.

These Tablets are made from the Natural Salts obtained from the famous Karl-Spring at Bad Mergentheim (South Germany), without any addition of sugar or other chemical ingredients.

Price 1/- per Tube of 25 Tablets.

Sole Wholesale Depot for Great Britain & Colonies—

6, Fann Street, Aldersgate Street, London, E.C.

Free Samples on application. **Free Samples on application.**

THE LANCET.

No. 4673. Vol. CLXXXIV. LONDON, SATURDAY, MARCH 22, 1913. Pp. 144.

CONTENTS.

The whole of the literary matter in THE LANCET is copyright.

THE LUMLEIAN LECTURES on Intrathoracic Aneurysm. Delivered before the Royal College of Physicians of London on March 6th, 11th, and 13th, 1913, by F. DE HAVILLAND HALL, M.D. Lond., F.R.C.P. Lond., Consulting Physician to the Westminster Hospital.—Lecture I. 803

THE ARRIS AND GALE LECTURES on the Genital Functions of the Ductless Glands in the Female. Delivered at the Royal College of Surgeons of England on March 10th and 12th, 1913, by W. BLAIR BELL, B.S., M.D. Lond., M.R.C.S. Eng., L.R.C.P. Lond., Gynæcological Surgeon to Outpatients, Royal Infirmary, Liverpool; Examiner in Gynæcology and Obstetrics to the Royal Colleges of Surgeons and Physicians, London; and to the University of Durham.—Lecture I. —*(Illustrated)* 809

ORIGINAL ARTICLES.

Bastedo's Sign: A New Symptom of Chronic Appendicitis. By ARTHUR F. HERTZ, M.A., M.D. Oxon., F.R.C.P. Lond., Assistant Physician to Guy's Hospital 816

Cases Treated by Radium in the Royal Infirmary, Edinburgh, during 1912. By DAWSON F. D. TURNER, M.D. Edin., F.R.C.P. Edin., F.R.S.E., in Charge of Radium Treatment at Edinburgh Royal Infirmary 817

Hyperextension and "Backfire" Injuries of the Wrist. By CUTHBERT S. WALLACE, M.B. Lond., F.R.C.S. Eng., Surgeon to St. Thomas's Hospital, in Charge of Outpatients 819

Ionic Medication in Herpes Zoster. By ANGUS MACNAB, M.B., Ch.B. Edin., F.R.C.S. Eng., Ophthalmic Surgeon, King Edward VII. Hospital; Chief Clinical Assistant, Royal London Ophthalmic Hospital, &c. 821

The Nature of Tea Infusions. By HENRY L. SMITH, B.Sc., F.I.C. 846

MEDICAL SOCIETIES.

ROYAL SOCIETY OF MEDICINE:
CLINICAL SECTION:—Exhibition of Clinical Cases 822
SECTION OF ANÆSTHETICS:—A Eulogy of Clover.—Technique in General Anæsthesia for Intranasal Operations.—Scopolamine-Morphine-Atropine as an Adjunct in Inhalation Anæsthesia and as a General Anæsthetic 824
SECTION OF PSYCHIATRY:—Recent Investigations on the Bio-chemistry of the Neuron.—Exhibition of Cases 826

MEDICAL SOCIETY OF LONDON: Rapid Section of Tissues for Microscopical Diagnosis.—Celluloid Splints 826

WEST LONDON MEDICO-CHIRURGICAL SOCIETY: Syphilitic Disease of Bones and Joints in Children 827

LIVERPOOL MEDICAL INSTITUTION: Physiology of Milk Secretion 828

MIDLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY: Myoma Complicating Pregnancy.—Ligaturing Forceps for Pelvic Surgery.—Localised Septic Peritonitis of Puerperal Origin.—Hysteropexy.—Congenital Intestinal Occlusion 829

ROYAL ACADEMY OF MEDICINE IN IRELAND: The Cœliac Affection 830

DEVON AND EXETER MEDICO-CHIRURGICAL SOCIETY: Some Reflections suggested by a Bladder Case 831

SOCIETY OF MEDICAL OFFICERS OF HEALTH: Block Dwellings for the Working Classes 831

GLASGOW MEDICO-CHIRURGICAL SOCIETY: Avoidance of Unsightly Scar Deformities in the Operative Treatment of Cervical Adenitis 832

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY: Nature of Certain Toxins and Protein Substances 832

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY: Treatment of Prolapsus Uteri 832

REVIEWS AND NOTICES OF BOOKS.

Innere Sekretion. Ihre Physiologischen Grundlagen und ihre Bedeutung für die Pathologie. Von Professor Dr. Artur Biedl 833

The Internal Secretory Organs: Their Physiology and Pathology. By Professor Dr. Artur Biedl. With an Introductory Preface by Leonard Williams, M.D. Glasg., &c. Translated by Linda Forster 833

An Introduction to the Study of Adolescent Education. By Cyril Bruyn Andrews 834

Pharmacology and Therapeutics for Students and Practitioners of Medicine. By Horatio C. Wood, Junr., M.D. 834

Die Puerperal Wundinfektion. By Dr. Albert Hamm 834

The Snakes of South Africa: their Venom and the Treatment of Snake-bite. By F. W. Fitzsimons, F.Z.S. 835

Lectures on Clinical Psychiatry. By Dr. Emil Kraepelin. Revised and edited by Thomas Johnstone, M.D. Edin., M.R.C.P. Lond. Third edition 835

Manisch-Depressives und Periodisches Irresein als Erscheinungensform der Katatonie. Eine Monographie von Dr. Med. Maurycy Urstein 836

Vergleichend-diagnostischer Atlas der Hautkrankheiten und der Syphilis. Von Dr. S. Ehrmann, A.O. 836

On Aristotle as a Biologist, with a Prooemion on Herbert Spencer. By D'Arcy Wentworth Thompson 836

Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India. No. 56. Malaria in the Andamans. By Major S. R. Christophers, M.B. Vict., I.M.S. 836

British Plant Galls: A Classified Text-book of Cecidology. By E. W. Swanton 837

Miscellaneous Volumes 837

LEADING ARTICLES.

AN AUSTRIAN VIEW OF THE WORK OF THE BRITISH ROYAL COMMISSION ON TUBERCULOSIS 839

DAVID LIVINGSTONE 840

ANNOTATIONS.

Two Surgical "Clubs" in London 841

The City of Madras and its Immunity from Epidemic Plague 841

The Easter Egg in Modern Terms 842

Spinal Fistula Due to a Stab in the Neck 842

Culinary and Chemical Experiments with Aluminium Cooking Vessels 843

Persistent Priapism in Leukæmia 843

Hypnotic Drugs on the Poisons Schedule 844

The Nature of Tea Infusions 844

The Diagnosis of Tertiary Syphilis of the Liver 844

Personal Experience of Glaucoma by a Medical Man 845

Para-melitensis Fever 845

VITAL STATISTICS:
Vital Statistics of London during February, 1913 847
Analysis of Sickness and Mortality Statistics in London during February, 1913 848

SPECIAL ARTICLES.

Medicine and the Law: Unsuccessful Action against a Surgeon.—Latham *v.* Stevens 847

The Services 849

Medical Practice under the Insurance Act. III.—The Fight Against the Panel at Gillingham.—*(To be continued)* 854

Manchester 855

Ireland 856

Paris 857

China 857

Notes from India 858

THE NATIONAL INSURANCE ACT.

The Canvassing of the Public: Action by the General Medical Council 861

German Insurance Statistics 861

Certificates by Practitioners not on the Panel 861

CORRESPONDENCE.

The Agreement to Attend a Confinement and its Liability (Messrs. Berry Tompkins & Co.) 851

The Royal Society of Medicine and the Society of Tropical Medicine and Hygiene (Dr. Charles F. Harford and Dr. George C. Low) 851

When to Operate in Appendicitis (Mr. W. H. Clayton-Greene) 851

Water Diuresis and Water Retention (Dr. Alfred S. Gubb) 852

Bread and the Spread of Tuberculosis (Dr. Arthur H. Priestley) 853

A Question in Lunacy Certification (Dr. L. Harris-Liston) 853

The Therapeutic Action of Splenic Extract (Dr. Krikor S. Krikorian) 853

The Vital Statistics of London (Dr. Binnie Dunlop) 853

The Pharmacology of Food 853

OBITUARY.

John Shaw Billings, M.A., M.D. 859

George Saunders, M.D.St.And., C.B. 860

Deaths of Eminent Foreign Medical Men 860

MEDICAL NEWS.

Literary Intelligence 838

Queen's Hospital, Birmingham 847

The Late Sir Alfred Jones's Bequests 850

Presentation to a Medical Man 856

Great Northern Central Hospital 860

University of London: King's College 861

Pass-list of the University of Bristol 862

Foreign University Intelligence 862

Gilchrist Studentship 862

The Irish Medical Schools and Graduates' Association 862

Birmingham General Hospital 862

Plymouth Dental Hospital 862

Leeds General Infirmary 862

PARLIAMENTARY INTELLIGENCE.

Notes on Current Topics: Medical Officers of Health (Superannuation) Bill.—Dogs (Protection) Bill.—The Select Committee on Patent Medicines.—The Debate on the Address 862

House of Commons 863

Books, &c., received 864

Appointments 864

Vacancies 864

New Addresses 865

Births, Marriages, and Deaths 865

Notes, Short Comments, and Answers to Correspondents 866

Meteorological Readings 866

Medical Diary 867

Acknowledgments of Communications received 868

FOR INDEX TO ADVERTISEMENTS SEE PAGES 2 & 4.

INDEX

MEDICAL AND OTHER BOOKS AND PUBLICATIONS

PAGE

ADLARD & SON:—
Fenwick .... Indications for Widely Resecting the Bladder Walls ..... Cover 1

ARNOLD:—
Sibley ..... Diseases of Skin. Cover 1

BAILLIERE, TINDALL & COX:—
Campbell.... Treatment ..... Cover 1
Vincent .... The Nutrition of the Infant ..... Cover 1

BALK, SONS & DANIELSSON:—
Adamson.... Significance of Skin Eruptions 6
Moullin .... Inflammation of the Appendix ..... Cover 1

CASSELL & CO.:—
Morris, Sir H. .... Diseases of the Skin .. 7

CHURCHILL, J. & A.:—
Beckley & Bonney .. Obstetric Practice 5
Cripps ..... Ovariotomy, &c. 6
Fenwick .... The Value of Radiography ..... Cover 1

PAGE

CHURCHILL—(Continued).
Thorne, Bezly..... Schott Nauheim Treatment, &c., of the Heart 6

FROWDE AND HODDER & STOUGHTON:—
Adamson.... Skin Affections of Childhood 6
Lockwood .. Aseptic Surgery..... 6
" .. Clinical Surgery 6
McCann .... Cancer of the Womb, &c. ..... Cover 1

GLAISHER:—
Herschell.... Treatment of Duodenal Ulcer ..... Cover 1
West ..... Granular Kidney, &c., 6

LEWIS:—
Campbell.... Headache ..... Cover 1
" .... Flushing, &c. 1
" .... Differences in Nervous Organisation of Man and Woman .. Cover 1
Coleman & Hilliard .. Anæsthetics in Dental Surgery..... Cover 1
Moullin .... Enlargement of the Prostate ..... Cover 1
" .... Biology of Tumours Cover 1
Tilley ..... Diseases of the Nose, &c. ..... Cover 1

PAGE

MACMILLAN & CO.:—
Ballance .... Cerebral Decompression in Ordinary Practice.. 6
Lockwood .. Appendicitis 6

MEDICAL PUBLISHING CO.—
Lane ..... Operative Treatment of Fractures 7
" ..... Cleft Palate and Hare Lip 7

NISBET & CO.:—
Lane ..... Treatment of Chronic Constipation 7
Paterson .... The Surgery of the Stomach ..... Cover 1

SAUNDERS COMPANY:—
Anders & Breton .... Medical Diagnosis 3
Books on Diagnosis ..... Cover 1
Cabot ..... Differential Diagnosis.. 3
DaCosta .... Physical Diagnosis 3
Eisendrath .. Surgical Diagnosis 3
Morrow .... Diagnostic and Therapeutic Technic..... 3
Sahli..... Diagnostic Methods .. 3

SCIENTIFIC PRESS:—
Sandberg & Tador .... Isotonic Sea Water Injections 6

PAGE

UNIVERSITY OF LONDON PRESS:
Bernstein.... Applied Pathology..... 6
Bidwell .... Minor Surgery 6
Biggs..... Diseases of Ears &c .. 6
Evans ..... Diseases of the Skin .. 6
Marshall.... Diseases of the Eyes .. 6
Mortimer.... Anæsthesia, &c. 6
Stevens .... Diseases of Women .. 6
Turner, &c.. Treatment after Operation 6
Whipham .. Medical Diseases of Children 6

WRIGHT & SONS (BRISTOL):—
Mummery .. Diseases of the Colon Cover 1
Smith ..... Lateral Spinal Curvature, &c. ..... Cover 1
The Medical Annual, 1913..... 7

MEDICAL LIBRARIES, &c.:—
Baker, Birmingham—Books..... 7
Bobbie—Stammering 7
Ketley—Stammering 7
Lewis's Circulating Library .. Cover 1
Matthews Bros.—Wood - Antiseptic of Trusses .. 6
Pharmaceutical Press 6

OFFICIAL AND GENERAL ANNOUNCEMENTS

APPOINTMENTS VACANT:—
Antrim County Council 69
Bethlem Hospital 67
Bolingbroke Hospital, Wandsworth Common .. 68
Brecon and Radnor Asylum, Talgarth 68
Brentford Union 67
Bridgwater Hospital 68
Bristol Eye Hospital 65
Bristol General Hospital 65
Bristol Royal Infirmary 65
Canterbury Borough Asylum 68
Chesterfield and North Derbyshire Hospital 67
City of Dundee Tuberculo is Medical Officer 69
City of Nottingham 67
County Asylum, Rainhill 68
County Asylum, Whittingham 68
County Borough of Blackburn 68
County Council of Durham 69
Darenth Industrial Colony, Dartford. 69
Darlington Hospital and Dispensary.. 68
Devonshire Hospital, Buxton 68
Dreadnought Hospital, Greenwich .. 68
East Suffolk Hospital, Ipswich 69
Elder Dempster & Co., Liverpool 70
Evelina Hospital for Sick Children .. 68
Gravesend Hospital, Ke s 70
Grimsby and District Hospital 68
Guest Hospital, Dudley 69
Ingham Infirmary and South Shields Dispensary..... 68
Jessop Hospital for Women, Sheffield. 68
Keighley and Bingley Fever Hospital and Sanatorium 67
Kensington and Fulham General Hos. 68
King Edward VII.'s Hospital, Cardiff. 68
Leicester Royal Infirmary..... 67
Liverpool Infirmary for Children 65
London Lock Hospital..... 70
London Temperance Hospital..... 67
Middlesex Hospital 68
Nobbs Hosp., Douglas, Isle of Man.. 65
North Devon Infirmary, Barnstaple.. 68
Nottingham General Dispensary 68
Oldham Royal Infirmary 66
Parish of Paddington 67
Queen's Hospital for Children..... 68
Rochdale Infirmary 66
Rotherham Hospital and Dispensary. 68
Royal Alexandra Hospital for Sick Children, Brighton..... 68
Royal Berkshire Hospital, Reading .. 68
Royal Halifax Infirmary 69
Royal Infirmary, Dundee 68
Royal Infirmary, Sheffield..... 67
Royal Infirmary, Sunderland..... 69
Royal Infirmary Children's Hospital, Sunderland..... 66
Royal London Ophthalmic Hospital .. 67
Royal National Sanatorium for Consumption, Bournemouth..... 70
Royal Naval Medical Service..... 62
Royal South Hants and Southampton Hospital 66
Royal Surrey County Hospital, Guildford 66
Royal Sussex County Hospital 66
Rubery Hill Asylum, Birmingham .. 68
St. Paul's Hospital for Skin, &c., Diseases, Red Lion-square..... 68
Salop County Council 68
Salop County and Wenlock Borough Lu. atic Asylum, Shrewsbury 68
Samaritan Free Hospital for Women. 68
Scarborough Hospital and Dispensary 70
Seamen's Hospital Soc., Greenwich .. 66

APPOINTMENTS—(Continued).
Sheffield Royal Hospital..... 66
Sheffield Union Hospital..... 67
Somerset and Bath Asylum, Oxford.. 68
Southampton Free Eye Hospital 68
Stirling District Asylum, Larbert.... 69
Stroud General Hospital..... 66
University College Hospital..... 71
Victoria Unive sity of Manchester .. 67
Warneford, Leamington, &c., Hosp., Leamington Spa 65
West African Medical Staff 69
West Ham and Eastern General Hospital 70
West Herts Hospital, Hemel Hempstead..... 68
West London Hospital and Post-Graduate College 66
West Riding of Yorkshire 69
Wolverhampton and Staffordshire General Hospital 67

ASSISTANCIES, MEDICAL..... 70

ASYLUMS, HOMES, &c.—
Ashwood House, Kingswinford 58
Association of Medical Men Receiving Resident Patients 66
Barnsley Hall, Bromsgrove 58
Barnwood House Hospital..... 59
Bishopstone House, Bedford..... 56
Bootham Park, York 66
Box 53, Cheapside 69
Brunton House, Lancaster..... 66
Buntingford House Retreat, Buntingford 61
Camberwell House, Peckham-road.... 56
Capel Lodge Retreat, Folkestone 64
Cheadle Royal 59
Clarence Lodge, Clapham-park 56
Colthurst House, Warford..... 57
Coppice, The, Nottingham..... 59
Dadson Nursing Home 64
Dalrymple House, Rickmansworth .. 62
David Lewis Colony, Alderley Edge.. 65
Dr E. Rosenberg Sanatorium..... 63
Farnham House, Dublin 60
Ghyllwoods 62
Grove House, Church Stretton 59
Grove, The, Catton, Norwich 59
Haydock Lodge, Newton-le-Willows.. 61
Heigham Hall, Norwich..... 56
Hendon Grove, Hendon 58
Home for Epileptics, Maghull 57
Inverurie Lodge Sanatorium, Colinsburgh 61
Kingsdown House, Box 58
Larkin, Grove Park 65
London Fever Hospital 59
Mailing Place, Kent 59
Malvern Hydropathic 64
Manna Mead, Blackheath 65
Maryville, Dublin 60
Melbourne House, Leicester 64
Meyrick, Brighton..... 63
Middleton Hall, Co. Durham 56
Moat House, Tamworth 59
Mount Vernon Sanatorium, Northwood 63
Newmains Retreat, Lanarkshire .. 61
New Saughton Hall, Polton, Midlothian 60
Nutbrach-on-Tees, Banchory 62
Northumberland House, Finsbury pk. 64
Northwood House, Winterbourne .. 60
Norwood Sanatorium, Ltd. 62
Oaks Island, Hevbridge 61
Oster, Dr., Ospedaletti..... 63

ASYLUMS—(Cont'd).
Otto House, West Kensington..... 64
Peckham House 60
Pendyffryn Hall Sanatorium 63
Pinewood Sanatorium..... 62
Plympton House, South Devon 59
Portsmouth Corporation Mental Hos. 68
Rusbury Sanatorium, Northallerton.. 63
St Andrew's Hospital Northampton 59
St. George's Retreat, Burgess Hill 64
St. Luke's Hospital for Mental Diseases 58
Springfield House Private Asylum, Bedford 59
Streeker, Cravenstreet..... Cover 1
Stretton House, Church Stretton 59
The Grange, Rotherham 59
Vale of Clwyd Sanatorium..... 65
Warneford Asylum, Oxford..... 58
White Hall, South Norwood Hill 58
Wye House, Buxton 59
Yarrow Convalescent Home, Broadstairs..... 61

FINANCIAL, &c.—
Equitable Reversionary Interest Soc . 55

HEALTH RESORTS, BATHS, &c.:—
Aix-la-Chapelle 63
Aix-les-Bains, Savoy..... Cover iv
Arosa 63
Bath Hydro, Bath 64
Cheltenham Spa 64
Cliffe Hydro, Ilfracombe 64
Royal Ems 63
Smedley's, Matlock 64

HOTELS:—
Hotel Windsor 63
White Hart Hotel, Margate 64

HOUSE & ESTATE AGENTS:—
Bedford & Co., Wigmore-street 71
Elliott, Son & Boyton, Vere-street .. 71
Head & Co. 71
Hoggs & Co., Brompton-road 71
Ley Clark Wimpole-street 71
Selwyn, Southend-on-Sea 71

LIFE & FIRE ASSURANCES:—
General Life Assurance Co. 55
National Provident Institution 55
Prudential 55

MASSAGE:—
Gilbert, Beaumont-street 71
Harley Institute school of Swedish Massage..... 56
London School of Massage 56

MEDICAL ACCOUNTANTS, &c.—
Turner 71

MEDICAL AGENTS:—
Blundell & Rigby 72
Fleidnall, Limited 72
Manchester Clerical, &c., Association. 72
Medical Agency 72
Needes, Herbert 72
Needes, J. C. 72
Peacock & Hadley 72
Scholastic, Clerical, &c., Assoc 73
Turner 71

MEDICAL SCHOOLS:—
(LONDON.)
London School of Clinical Medicine .. 55
West London Post-Graduate College.. 55
(PROVINCIAL, &c.)
University of Birmingham..... 54
University of Durham College of Medicine, Newcastle-upon-Tyne.... 54

NURSING INSTITUTES:—
Army and Navy Male Nurses Co-operation 57
General Nursing Association 57
Hanley Institute for Nurses..... 56
Hospital for Sick Children, Great Ormond street..... 56
Leeds Trained Nurses' Institution.... 56
London Nurses' Association 56
London Temperance Male and Female Nurses Co-operation 57
Male Nurses Temperance Co-operation 56
Mental Nurses Co-operation..... 56
National Hospital Male Nurses' Assoc. 56
New Mental Nurses' Co-operation.... 57
Nurses' Co-operation, Portland-place 57
St. John's House 56
St. Luke's Hospital, E.C..... 57
Temperance Association of Male Nurses, Ltd. 56
Temperance Male Nurses Co-operation 57
Temperance Male and Female Nurses Co-operation..... 57
The Retreat, York 57

OFFICIAL NOTICES:—
City of London Lying-in Hospital 55
Imperial College of Science and Technology 55
Medical Graduates' College, &c..... 55
Public Health (London) Act..... 54
Queen Charlotte's Lying-in Hospital. 55
Royal College of Physicians of Edinburgh, &c. 55
Royal College of Physicians of London 54
Royal Society of Medicine .... Cover 1
Throat Hospital, Golden-square 54
University of Cambridge 55
University of London, University College..... 53
West End Hospital 55
West End Hospital for Diseases of Nervous System 55

PARTNERSHIPS & PRACTICES:—
Manchester Clerical, &c., Association 71
Northern Medical Assoc., Glasgow .. 71
No 268, L.O., Strand..... 71
No. 2?0, L.O., Strand..... 71
Peacock & Hadley, Craven-street 71
Turner, Adam-street 71

RAILWAY & STEAMSHIP CO.'S:—
New Zealand Shipping Co..... 55

SCHOOLS, PREPARATORY, &c.:—
Rossett House Boarding and Day School 55

TUTORS & LECTURERS:—
Beckton 55
No. 107, Lo. .. 55
Med. Corres. Coll. 55
Med. Graduates' College,..... 55
Schnelle 7
Weymouth . 55, 55

For Index to Trade and Miscellaneous Advertisements see page 4.

The Lumleian Lectures
ON
INTRATHORACIC ANEURYSM.

Delivered before the Royal College of Physicians of London on March 6th, 11th, and 13th, 1913,

BY F. DE HAVILLAND HALL, M.D. LOND., F.R.C.P. LOND.,
CONSULTING PHYSICIAN TO THE WESTMINSTER HOSPITAL.

LECTURE I.

Delivered on March 6th.

MR. PRESIDENT, FELLOWS AND GENTLEMEN,—My first duty is to tender my grateful thanks to the Censors' Board for selecting me for the post of Lumleian lecturer. On referring to the annals of the College it will be seen that the Lumleian lectures were the first lectures to be founded in the College, and there is on record the steps that were taken "for the better celebration of this most solemn lecture." At their inception the surgical side of the great science of medicine was chosen as the proper object of the lectures; it will be, therefore, not altogether unsuitable if I devote some portion of the time to the consideration of what surgery can do for the alleviation of intrathoracic aneurysm.

In selecting my subject, intrathoracic aneurysm, I was influenced by the fact that from the commencement of my medical career I was attracted by the difficulties in the diagnosis of this disease and by the tragedy which so often accompanies its progress. You have before you a disease which usually strikes down men in the prime of life, sometimes they die quite suddenly without any warning, except perhaps some vague pain or discomfort, or, on the other hand, you may see a poor being suffering the "throbs of fiery pain" which attend the gradual erosion of the ribs or vertebræ, and this anguish may be protracted for months, so that death comes at last as a merciful release. Finally, there is its all but certain progress to a fatal termination, with just sufficient hope to tantalise the patient should he be conversant with the facts of the disease. In all medicine I know nothing more pathetic than what is seen in cases of aneurysm.

I will preface my remarks by saying that the scope of the lectures is limited to the discussion of the saccular variety of intrathoracic aneurysm chiefly from a clinical point of view.

ETIOLOGY.

The two prime factors in the production of an aneurysm are some degenerative change in the wall of the artery and strain. This is borne out by the fact that aneurysms are most frequent at that period of life when the greatest bodily vigour coexists with the commencement of atheroma. There can be no doubt that among the most important conditions giving rise to aneurysm is the endarteritis of syphilitic origin. Out of 89 male deaths from thoracic aneurysm in the Westminster Hospital there was a history of syphilis in 34, and in 9 female deaths a history in 4—i.e., a total of 98 deaths, with a syphilitic history in 38. The probability is that this does not express the full importance of syphilis in the production of aneurysm, as the difficulty of obtaining a correct history in hospital patients is well known. When the Wassermann test comes to be employed as a matter of routine in every case of aneurysm, we shall be in a better position to assign to syphilis its true place in the causation of aneurysm. Overwork, especially under unfavourable conditions, gives rise to degenerative changes in the vascular system and to localised patches of atheroma. The effect of alcohol in producing aneurysm is rather more doubtful. It is generally agreed that it is a potent cause of degenerative changes in the arteries, but this is usually accompanied with loss of tonicity in the arterial wall, and there is little tendency for the changes to be circumscribed. The beer-drinker who imbibes huge quantities of fluid keeps his vessels at a high tension, and if he be also a hard worker then doubtless there is a liability to aneurysmal dilatation. If, as is often the case in these circumstances, syphilis be thrown in, the man is extremely likely to develop an aneurysm.

The statistics I am about to quote strongly support the usually accepted view that thoracic aneurysm is most common during the period of great bodily activity coinciding with the commencement of degenerative changes in the vessels. The following tables illustrate this point:—

Table of Age Incidence at Death (Dr. Oswald Browne's figures).

Age at death.	Men.	Women.
Under 35	22	2
35 to 55	82	15
Over 55	18	1
Age not given...	10	0
	132	18

Only one case occurred before the age of 25, a girl aged 15, and only two over 65, both men. These figures may be compared with those extracted from the post-mortem records at the Westminster Hospital.

Age at death.	Men.	Women.
Under 35	19	2
35 to 55	64	7
Over 55	5	0
Age not given...	1	0
	89	9

Only two cases occurrred before the age of 25, both men aged 24 years, and only one case over 65, a man aged 68 years. The average age at death (Westminster Hospital cases) for men is slightly over 43 years; for women almost exactly 43 years. As might have been expected, the syphilitic cases occur at a somewhat earlier period. The age incidence at death is almost exactly the same for men and women—i.e., 40 years. The figures are, of course, few, but they are suggestive.

A specimen in the museum of St. Bartholomew's Hospital, taken from a boy 6½ years of age, is an example of at how early an age an aneurysm of the aortic arch may occur. Death was due to rupture into the pericardium. The aneurysm was probably owing to localised septic aortitis, the boy having suffered from middle-ear suppuration.[1]

As regards the sexual proclivity of thoracic aneurysm, it would appear that it is a comparatively rare disease in females. All the cases I have seen in private have occurred in males, and in my hospital practice the cases of thoracic aneurysm in women have been of very infrequent occurrence. Between the years 1884 and 1910—both included—there were admitted into the wards of the Westminster Hospital 160 men and 28 women in whom the diagnosis of thoracic aneurysm was made. According to Lebert,[2] the proportion of males affected compared to females is as 10 to 3. Dr. Oswald Browne's figures give 122 to 18. From the post-mortem records at Westminster Hospital the figures are 89 males to 9 females. The last two sets of figures combined work out nearly 8 males to 1 female. The most reasonable explanation of this discrepancy is the greater strain to which men are liable, and this will especially explain the almost complete exemption of women in the upper ranks of society.

As Dr. Drummond[3] has pointed out, it is recognised "that certain diseases are more prevalent in some parts than others." This is certainly the case in regard to the occurrence of thoracic aneurysm in the Tyneside district. When examining for Durham University at Newcastle-on-Tyne I had the opportunity of observing this fact. From his large experience in the disease Dr. Drummond's conclusions are naturally of great value. As regards strain from heavy and laborious occupation being the chief factor in the causation of thoracic aneurysm, he says: "A careful examination of upwards of 300 examples has convinced me that this view is incorrect. For instance, out of a group of 145 cases in which the point was specially noted, 64 only had been engaged in heavy employment; in 81, including 14 women, the question of strain could be eliminated." His inquiry shows history of syphilis in 102 out of 145 cases. In his opinion, "Aneurysm of the thoracic aorta is undoubtedly a syphilitic disease, though aortic strain from hard work, where the tissues are already degenerated by alcoholic excesses, must certainly predispose." In more than 40 per cent. of his cases a strong alcoholic history was obtained.

Dr. Lee Dickinson[4] laid great stress on hypoplasia as a cause of aneurysm, and has put on record four cases in

which this condition was apparently an important factor in the development of the aneurysm. He pointed out that women are notoriously more liable to hypoplasia than men, and it would seem that the rapid course which aneurysms run in women and their tendency to rupture externally may be dependent upon this peculiarity of the aortic wall. It may also possibly account for the occurrence of aneurysm in young children, which is not susceptible of explanation by ordinary causes.

SITUATION OF THE ANEURYSM.

From an analysis of 150 cases of thoracic aneurysm dying in St. Bartholomew's Hospital[5] in the 30 years intervening between October, 1867, and May, 1897, and which were submitted to a post-mortem examination, the following figures indicate the portion of the aorta involved in the aneurysm: ascending portion of arch, 58; transverse portion of arch, 35; ascending and transverse portions combined, 19; descending portion of arch, 21; and descending thoracic aorta, 17; total, 150. The statistics of Crisp, Lebert, and Myers show the following figures: ascending aorta, 159; arch of aorta, 113; and descending thoracic aorta, 49; total, 321. The following are the statistics of Westminster Hospital: ascending portion of arch, 28; transverse portion of arch, 21; ascending and transverse portions combined, 10; descending portion of arch, 6; more than one portion of arch, 9; descending aorta, 18; and multiple aneurysms, 6; total, 98. These figures would apparently indicate that the force of the ventricular systole is a potent factor in the production of aneurysmal dilatations, as the frequency of the disease diminishes as the distance from the heart increases.

Aneurysms of the ascending part of the arch of the aorta, which come to the surface and give rise to a tumour, almost invariably arise from the right or convex side of the vessel, and tend to enlarge towards the right. Dr. Gee states that he has found only one reference to a state of things contrary to that mentioned above as being the rule; and he quotes Oppolzer[6] when speaking of aneurysm of the ascending aorta as follows: "That as to the situation of the tumour to the right of the sternum, this is undoubtedly the rule in the majority of instances, inasmuch as the aneurysms arise likewise, as a rule, from the convex side of the arch. But in exceptional cases they spring not from the convex but from the concave wall of the aorta, and then the said tumour is found, not on the right, but on the left side of the sternum." Dr. Gee[7] has himself recorded a case in which a low, rounded, smooth tumour was seen stretching from the second to the fifth ribs on the left side between the sternum and the nipple line. Systolic pulsation was palpable, and a blowing systolic murmur and a weak second sound were audible over the tumour. Dr. Gee considered it probable that the signs were produced by an aneurysm of the pulmonary artery, but at the necropsy the aneurysmal sac was found to be formed by dilatation of the whole of the ascending part of the arch of the aorta.

The case I have just narrated illustrates the view that we are not justified in inferring the place of origin of an aneurysm from the place at which it appears on the chest. As another example of this difficulty I may point out that an aneurysm arising from the descending portion of the aorta has, nevertheless, come to the surface against the upper ribs.

Of aneurysms at the sinuses of the aorta I have had but little experience. I recorded[8] a case of a patient with four distinct aneurysms in the arch of the aorta, one of which was of this nature. Just above the aortic valve, corresponding to the sinus of Valsalva, was an aneurysmal cavity of the size of a small Tangerine orange. The valve allowed slight regurgitation. In his article on "Aneurism at the Sinuses of the Aorta" Sir Richard Douglas Powell[9] remarked: "The *diagnosis* can rarely be made with certainty. It is almost impossible to single out from among the symptoms which may be accounted for by the many attendant lesions, those peculiar to an aneurism rarely exceeding the size of a filbert, and buried in the base of the heart." A diastolic murmur is frequently met with in these cases, but it is often inaudible, and comes and goes without any definite reason. In my case it is quite certain that there was no diastolic murmur while he was attending as an outpatient, but soon after his admission a loud diastolic murmur was audible, in the production of which this aneurysm took, I believe, a leading part. This view is in agreement with that given in Fagge and Pye-Smith:[10] "If the aneurism forms a pouch in the sinuses of Valsalva the valves become involved, their closure may be prevented, a diastolic bruit be produced, and all the other signs and symptoms dependent upon regurgitation occur. These may, indeed, be the only symptoms, and none exist indicative of the presence of an aneurism. The sac never grows to any great size, and usually bursts into the pericardium and causes instant death."

A symptom occasionally noticed is a single or double murmur at the pulmonary orifice; this is met with when the aneurysm develops in the direction of the pulmonary opening, and thus by increase in size distorting that orifice.[11]

A very unusual, indeed I might almost say unique, point of projection of an aneurysm is that recorded by Dr. Churton.[12] During life the swelling extended from the second to the fourth rib and from the mid-axilla to the nipple line, so that the aneurysm projected into the right axilla. At the necropsy the aneurysm was found to lie wholly in front of the lung and to have compressed the lung. An aneurysm of the descending portion of the arch may appear externally, to the left of the spinal column, as in a case reported by Dr. John Brunton.[13] The swelling was noticed between the vertebral border of the left scapula and the spinal column, the scapula being pushed outwards. Death occurred by rupture into the left pleural cavity, and at the necropsy a large aneurysm was found communicating with the posterior wall of the aorta.

The existence of several aneurysms in the same patient is a well-recognised fact. The physician is usually satisfied in being able to diagnose the presence of one aneurysm, but he should always bear in mind the possibility that more than one may exist. In a patient, a man of 36, whose case I read before the Medical Society of London,[14] I definitely recognised and recorded the presence of two aneurysms, but at the post-mortem examination four distinct aneurysms in the thoracic aorta were found.

Aneurysms of the arch of the aorta, especially when of large size, may cause considerable displacement of the heart in a downward direction, so as to give rise to epigastric pulsation. Dr. Hugh Walsham[15] has shown by means of the fluorescent screen that the heart occupies nearly a transverse position in the chest in many cases of aneurysm of the aortic arch. This position of the organ tends to raise rather than to lower the apex, unless there be considerable hypertrophy of the left ventricle, which is the exception in aortic aneurysm. Dr. Walsham claims that, in the absence of other physical signs of aneurysm of the aorta, this transverse position of the heart may be of great diagnostic value. My colleague, Dr. R. G. Hebb, has for many years demonstrated and taught at the Westminster Hospital that aortic aneurysm is not a cause *per se* of hypertrophy of the left ventricle of the heart. Dr. J. Calvert[16] has carefully analysed Dr. Oswald Browne's cases, and he has come to the conclusion that, so far as the records of St. Bartholomew's Hospital are concerned, there is no evidence in favour of aortic aneurysm being a cause of hypertrophy of the left ventricle. I think it may be taken for granted that some other explanation of the hypertrophy in these cases can be found. There is usually no dilatation of the ventricle, provided the aortic valve remains competent; so that a large aneurysm may exist within an inch of the aortic ring, and yet the left ventricle may be normal.

The chief characteristics of aneurysms affecting the different portions of the thoracic aorta require mention. Aneurysms of the intrapericardial portion of the arch may be so small as to elude the most careful examination, and they may cause unexpected death by rupture and hæmorrhage into the pericardium. Aneurysms of the first part of the arch of the aorta beyond the attachment of the pericardium were designated by Broadbent the aneurysms of physical signs, as they usually come to the surface and yield very definite indications. The physical signs are first manifested in the second right interspace, and the signs advance in a downward direction, so that later on they may be clearly recognised in the third space. Aneurysms affecting the transverse and descending part of the arch were termed by Broadbent aneurysms of symptoms as owing to pressure on the trachea, œsophagus and other structures they present marked symptoms, but physical signs may be equivocal. Pulsation of an aneurysm of the transverse arch may sometimes be felt in the episternal notch; an aneurysm

of the descending portion of the arch may come to the surface in the left infraclavicular region, or may even appear in the left interscapular region.

Aneurysms involving the descending thoracic aorta may well be called aneurysms of latency, as they often exist without definite symptoms or physical signs, and death may take place quite unexpectedly by rupture into the pleural cavity. When aneurysms of this portion of the aorta give rise to any symptom it is usually pain of an excruciating nature, due to pressure on, and erosion of, the vertebræ. As a result of the destruction of the vertebræ paraplegia may occur. Other symptoms sometimes met with in aneurysm of the thoracic aorta are dyspnœa and cough due to pressure on the root of the lung, and dysphagia from compression of the œsophagus. Owing to the depth at which the aneurysm is seated physical signs are usually conspicuous by their absence. As a result of pressure on the left bronchus there may be defective entry of air over the left lung, and, as Dr. Newton Pitt has pointed out, a diffuse bronchiectasis, with the expectoration of a large quantity of mucus, may result. If the aneurysm attain to a large size there may be impairment of resonance on percussion to the left of the spine, and a pulsating tumour has even been felt.

In opening a discussion on the Diagnosis and Treatment of Aneurysm of the Aorta at the Medical Society of London in December, 1889, Sir Richard Douglas Powell [17] made the following statement: "The essential phenomena of aneurysm are, firstly, those derived from the pressure of a tumour upon surrounding parts; secondly, those indicative of that tumour being a vessel tumour, a diverticulum from the main artery. If in attempting to make a diagnosis we reverse this logical order of reasoning, and attach primary importance to the evidences of arterial disease and insufficient weight to the presence or absence of those of tumour, there are many clinical snares and pitfalls awaiting us." These wise words should always be borne in mind when examining a patient with symptoms or signs suggestive of aneurysm.

SYMPTOMS.

The symptoms met with in intrathoracic aneurysm may be grouped as follow: (I.) Pain; (II.) Respiratory symptoms; (III.) Laryngeal symptoms; (IV.) Circulatory symptoms; (V.) Dysphagia; (VI.) Paraplegia and Hemiplegia; and (VII.) General symptoms.

I.—*Pain.*

Pain is one of the earliest and most constant of the symptoms of aneurysm. It may be of three kinds: (1) anginal, (2) that due to pressure, and (3) neuralgic. It is important to bear in mind that angina pectoris of the most typical character may owe its origin to aneurysm, otherwise the physician may be content with recognising the symptom and fail to discover its cause. As in other forms of angina, the pain may vary from slight discomfort in the cardiac region to the severest form of angina pectoris, in which the sufferer experiences acute pain in the præcordium, extending down the left arm, with an awful sense of constriction in the chest and the fear of impending death. In aneurysm, also, the distribution of the pain is the same as in angina due to other causes—i.e., it most frequently extends down the left arm, but the right arm may be affected; indeed, the pain may radiate to any part of the body.

In considering the effects produced by pressure of the growing aneurysm, it must be remembered that pain may be the only symptom to direct attention to the insidious malady, which is fraught with such terrible consequences to its victims. Deep-seated and persistent pain in the chest and back is most commonly due either to aneurysm or to a malignant growth, and it will sometimes puzzle even an experienced physician to decide with which of these two conditions he has to deal. The advice given by Sir Thomas Watson [18]—that Nestor of medicine—whose lectures, I am afraid, are seldom read in these scientific days, should be kept in mind: "When an adult person makes constant complaint of certain morbid feelings in a part, the probability is that he *has* something the matter, and we must investigate the case with what helps we can get." Fortunately since his days science has placed in our hands resources for investigation of which he could never have dreamt. A patient who has persistent pain in the chest which cannot be assigned to any definite cause should be X-rayed, and this method of examination will usually suffice to clear up the diagnosis.

The pain resulting from pressure of the aneurysmal sac upon the vertebræ is frequently of an agonising character, so that the unfortunate sufferer is at times tempted to put an end to his misery. Yet, on the other hand, we may come across cases in which the aneurysm in its onward march has eaten through the ribs, and appeared as an external tumour on the surface of the chest, though the patient may deny that at any time he has experienced pain—certainly not severe pain. I am at loss to explain the reason for this great difference, but that it exists I am sure. Dr. Sutton [19] gives a notable example of such a case: "There was a man lying in the ward with a big pulsating mass which I thought was an aneurysm, and the largeness of the pulsation made me suspect that the aneurysm had burst. I thought that the inexperience of the clerk might prevent his getting at the history rightly, so I took the notes myself. 'I was well,' said the patient, 'till a few weeks ago, when I was jammed by a cart against a load of bricks.' But an aneurysm had eroded his vertebræ for months and months, and the accident had burst it. How obscure!" I can but repeat after Dr. Sutton, How obscure! Why in one case the pain should be so severe and so persistent, and in another case, apparently quite similar, pain may be entirely absent, is a problem I am unable to solve. As a rule, the comparative painlessness which attends the eroding by an aneurysm of the sternum and ribs is in striking contrast to the prolonged anguish of pressure on the spine.

The pain caused by a thoracic aneurysm eroding the vertebræ has been mistaken for the pain of indigestion. The severity and persistence of the pain in the former instance should prevent this mistake being made. In some cases sensitive areas will be detected on the chest wall. The neuralgic pains met with in cases of aneurysm radiate up the neck, down the arms, and all over the chest, and Dr. Graham Steell [20] has drawn attention to "the occasional *occipital* pain suffered by patients the subjects of aneurysm of the arch." In two instances he has known this symptom to be so severe as to be the most prominent of the case. In a few cases herpes zoster has occurred. Very severe pain in the chest attends the formation of a dissecting aneurysm. Aneurysmal pain due to pressure is more complained of at night, and is relieved by change of position, whereas the anginal type of pain is worse during the day and aggravated by exertion.[21] Dr. Drummond [22] is of opinion that the position of the aneurysmal sac may frequently be diagnosed from the distribution of the pain, and he has given a diagrammatic explanation of his view on the subject. It has been suggested that the very pronounced effect that large doses of iodide of potassium have in relieving the pain of aneurysm might be of diagnostic value in recognising the aneurysmal origin of the complaint.

II.—*Respiratory Symptoms.*

Dyspnœa is a very common symptom in aneurysm, and it may be brought about by various causes. If accompanied by stridor it is highly suggestive of aneurysm. Two kinds of dyspnœa are to be recognised—i.e., a paroxysmal dyspnœa and a gradually increasing difficulty of breathing. The former is probably due to implication of the vagi or recurrent laryngeal nerves, or to compression of the small branches of the pneumogastric forming one of the pulmonary plexuses; and the latter to direct pressure upon the trachea or bronchial tubes. Reflex irritation of the vagi will cause most alarming and paroxysmal attacks of dyspnœa due to spasm of the adductors of the vocal cords, precisely resembling attacks of laryngismus stridulus occurring in childhood. As Gairdner [23] long ago pointed out, pressure of an aneurysm upon the pulmonary plexus of nerves may give rise to symptoms very closely resembling those met with in spasmodic asthma. The possibility of the presence of an aneurysm should therefore be borne in mind, in the event of the sudden occurrence of an asthmatic paroxysm in a previously healthy man. Occasionally pressure upon the trachea will give rise to dyspnœa with paroxysmal exacerbations resembling asthma. This is probably due to variations in the fulness of the aneurysmal sac. Dyspnœa may also result from congestion of the lungs, from pressure on the vessels in the root of the lung, or from a dilated condition of the bronchi. Inflammatory changes in the pleura may occur by extension from the aneurysmal sac, and a pleural effusion may be the result, giving rise to persistent dyspnœa. Secondary changes in the heart, as a result of

aortic regurgitation, may also cause dyspnœa. The sudden onset of dyspnœa in a patient in whom an aneurysm may or may not have been suspected may be due to the rapid dilatation of some portion of the aneurysmal sac already in contact with the trachea; this may bulge into the air-passage, and may even be recognised by the aid of the laryngoscope.[24] The character of the stridor may be of assistance in deciding as to the cause of the dyspnœa. If stridor be heard only with inspiration, the difficulty of breathing arises from paralytic stenosis of the glottis, whereas if the obstruction be seated in the trachea there will be stridor with both inspiration and expiration.

In November, 1900, I opened a discussion on Aneurysm at the Medical Society of London by reading notes on a case which had been under my observation for nearly five years. The remarks on cough which I made on that occasion give very much my present view of this symptom: "Too much value should not be attached to any one symptom in the absence of other corroborative symptoms and signs, but I do think that a harsh, brassy cough occurring in a man over 50 with rather rigid vessels, with a history of gouty symptoms, of syphilis, and of hard work, should certainly lead to the careful consideration of the possibility of an aneurysm being the cause. Pressure upon the trachea, bronchus, vagus, or recurrent nerve by any kind of tumour may give rise to a similar cough, but I think that it is of more common occurrence in cases of aneurysm than in the case of other intrathoracic tumours."

In the X ray examination we have an almost certain means of detecting an aneurysm, so that the existence of a cough such as I have just described should lead as a matter of course to the patient being screened. When an aneurysm comes in contact with the trachea or bronchus there is always a tendency to cough, hence this symptom is particularly frequent in aneurysms involving the transverse and descending parts of the arch.

The characteristic cough of aneurysm has been described as ringing, brassy, rough, guttural, or compared to a leopard's growl. The cough may be harsh and dry, or it may be accompanied by a mucous expectoration, sometimes tinged with blood. If bronchiectasis be present the sputa will be purulent. In the early stage of pressure on the recurrent laryngeal nerve, the voice is little if at all altered, but when both the abductor and adductor muscles are paralysed and the cord is in the cadaveric position, the voice has a muffled, hoarse tone, which is readily recognised by the practised ear, so that the paralysis may be suspected as soon as the patient begins to speak. Hæmoptysis is frequently met with in cases of intrathoracic aneurysm—indeed, it may be the first symptom to direct attention to the presence of an aneurysm. It may be very profuse, the patient dying from actual loss of blood or suffocation, or the expectoration may be merely streaked with blood.

The causes of pulmonary hæmorrhage due to aortic aneurysm are of three kinds: (1) Direct—i.e., where there is a leak from the aneurysmal sac into the air passages; (2) indirect—where the hæmorrhage is the result of pressure; and (3) secondary cardiac disease. The hæmoptysis of direct origin may at first be very slight, merely an oozing of blood into a bronchus or the trachea, the opening being closed by a clot. But there generally comes a time when a profuse gush of blood occurs, causing sudden death. Cases, however, are on record in which after repeated small losses of blood the hæmoptysis has ceased, and yet at the necropsy evidence of direct communication between the aneurysmal sac and the air passages has been found. In the second form—the indirect group—there may be (*a*) pressure on the air passages; (*b*) pressure on the blood-vessels; and (*c*) pressure on the lung substance. Wherever the pressure is exerted the effect is to cause congestion of the tubes or the lungs. It is this congestion which is so often responsible for the irritable and paroxysmal cough of aneurysm, the sputa being frequently blood-tinged. In the third kind—secondary cardiac disease—the hæmoptysis occurs, just as it does in primary heart disease, from engorgement of the pulmonary circulation. One of the most common valvular defects, secondary to aneurysm, is dilatation of the aortic ring with consequent aortic regurgitation. The occurrence, therefore, of hæmoptysis in a patient of the age and under circumstances to justify a diagnosis of aneurysm, should always lead to a careful consideration of the possibility of the hæmorrhage being of aneurysmal origin, especially if a paroxysmal cough be associated with it. Indeed, the appearance of a slightly stained sanguineous expectoration may be the precursor of a more abundant hæmoptysis to be followed by rupture. The expectoration is sometimes rusty, like that met with in pneumonia, or it may resemble the prune-juice expectoration of pulmonary apoplexy.

III.—*Laryngeal Symptoms.*

Probably on account of the fact that I was for many years in charge of the throat department at the Westminster Hospital, and that I have had a large number of throat patients sent on to me in private, I have been much impressed with the frequent association of paralysis of the left recurrent nerve with intrathoracic aneurysm. In many instances patients have been sent to me by their medical advisers, or have come to me of their own accord, suffering from hoarseness, and on laryngoscopic examination the left vocal cord has been found in the cadaveric position. It must, however, be borne in mind that, in cases of intrathoracic trouble, the physician should not wait for the onset of hoarseness, but that he should carry out a laryngoscopic examination as a matter of routine, having regard to the fact that, in accordance with the law enunciated by Sir Felix Semon, the abductor fibres of the recurrent laryngeal nerve succumb to the effect of pressure or disease before the adductor fibres, consequently the vocal cord, at an early stage of the disease, may be in the position of adduction, and in this event the voice is practically normal.

In an out-patient under my care at the Westminster Hospital,[25] I had the opportunity of observing the changes which occur as the result of pressure on the left recurrent. At first, from commencing paralysis of the abductor muscle, the cord was less vigorous in its movements; later, all power of abduction ceased, and the cord was found in the middle line; still later the adductor muscles were implicated and the cord was seen motionless in the cadaveric position. If, therefore, a patient comes complaining of hoarseness, or if there be obscure signs of intrathoracic trouble, the discovery of left recurrent paralysis would be strong evidence in favour of aneurysm, and no other diagnosis should be seriously considered until all the points in favour of aneurysm had been carefully investigated.

I do not know of any reliable figures on an extensive scale as regards the frequency with which laryngeal paralysis is met with in cases of intrathoracic aneurysm. In 35 consecutive cases of aortic aneurysm from my private case-books the recurrent laryngeal nerves were affected in 22 patients. The conditions were as follows: in 2 patients there was impaired movement of the right vocal cord; in 5 impaired movement, usually abductor paralysis, of the left vocal cord; in 14 the left vocal cord was seen to be in the cadaveric position; in 1 case there was bilateral abductor paralysis. In 1 patient, who was too ill to be examined laryngoscopically, the voice strongly suggested recurrent paralysis. In the remaining 12 cases the larynx was not affected. Tansk's[26] experience in the clinic at Pest is very similar. He noted hoarseness in 22 out of 41 cases of aneurysm; paralysis of the recurrent, usually on the left side, was seen in 19 cases; bilateral paralysis was said to be very rare. The number of cases in which I have observed laryngeal palsy in aortic aneurysm is quite out of all proportion to its occurrence in the practice of physicians with a less special experience.

If we except aneurysms of the first part of the arch of the aorta, in which the physical signs are usually quite distinct, in aneurysm affecting the remaining portion of the arch of the aorta there is no physical sign so constant and of so great diagnostic importance as the cadaveric position of the left vocal cord. A case I brought before the Medical Society[27] illustrates this point. At the left apex there was dulness to the second rib, and the resonance was impaired to the third rib; there was also dulness over the left apex posteriorly. There was deficient entry of air over the left lung, but there were no abnormal breath sounds. The apex of the heart was in the nipple line, 3 inches below the nipple. There were no murmurs when the patient was first seen, but later a loud diastolic murmur was audible. The absence of a pulse in the left radial artery was suggestive of aneurysm, and the cadaveric position of the left vocal cord practically clinched the diagnosis. Had this latter condition not been looked for and the condition of the left pulse not recognised, I can readily

conceive that a diagnosis of old phthisical mischief at the left apex might have been made; indeed, this very mistake was made by a candidate to whom I had given the patient as a clinical case for examination. The post-mortem examination showed that there was at the junction of the second and third parts of the arch an aneurysm having an external circumference of 9 inches. The sac was lined with laminated fibrin 1¼ inches in thickness. Its outer wall was closely adherent to the apex of the left lung. Both the left pneumogastric and recurrent laryngeal nerves were lost in the wall of the sac.

Paralysis of the left recurrent nerve, then, not only points very clearly to the probability of the existence of an intrathoracic aneurysm, but it also indicates the position of the aneurysm as being usually seated on the transverse or descending part of the arch of the aorta. While implication of the left recurrent nerve is very commonly present in aortic aneurysm, the right recurrent is much less frequently affected. In 35 consecutive cases from my private practice the right recurrent, as I have already mentioned, was affected only twice as against 19 times for the left nerve. The reason of this great difference depends upon anatomical considerations; the left recurrent nerve turns round under the aortic arch and is therefore particularly liable to pressure; the right recurrent nerve winds round the subclavian artery and is, therefore, situated at a considerable distance from the arch of the aorta. Should, however, the sac of the aneurysm involve the innominate artery, the right recurrent nerve may be implicated, or, as in an extremely interesting case communicated by Dr. Scanes Spicer[29] to the Laryngological Society, the aneurysmal tumour had displaced the lower part of the trachea backwards and to the right in such a way, that the convexity of the deflected trachea pressed on the right recurrent and pneumogastric nerves, causing paralysis of the right vocal cord. Again, as Sir George Johnson[29] suggested, centripetal irritation of the trunk of the left vagus may act on the nervous centre, and through it upon the nerve-supply to the laryngeal muscles on the right side. A case of Sir Anthony Bowlby,[30] in which an aneurysm of the aortic arch compressed the left pneumogastric and recurrent laryngeal nerves and the trachea, and in which there also existed abductor paresis of the right vocal cord, is a good illustration of Johnson's theory, as at the post-mortem examination the right pneumogastric and recurrent laryngeal nerves were found to be quite free from all pressure.

IV.—*Cardiac Symptoms.*

Among circulatory symptoms may be mentioned pain of an anginal character—to this I have already referred—and throbbing, but, as a general rule, it is quite astonishing how little the heart seems to be affected by the presence of an aneurysm unless there be coexisting disease of the aortic valve. When dilatation of the heart occurs, usually in connexion with aortic regurgitation, dyspnœa, palpitation, and irregular action of the heart often result. Pericarditis is a comparatively rare complication of aortic aneurysm; it occurred once in the 98 cases at Westminster Hospital; it may be brought about by pressure of the aneurysmal sac upon, and irritation of, the pericardium. Adhesion between the aneurysmal sac and the pericardium is not uncommon, and death in these cases may result from rupture into the pericardium. The occurrence of rupture is attended by agonising pain, speedily followed as a rule by syncope and death.

V.—*Dysphagia.*

In aneurysms affecting the third part of the arch and the descending aorta the patient may experience difficulty in swallowing, due to pressure of the sac upon the œsophagus. It is very important to bear this in mind before any attempt be made to pass a bougie or other instrument down the œsophagus, otherwise sudden death may occur from rupture of the sac. Owing to the sac ulcerating into the œsophagus the patient may at first vomit small quantities of blood, until at last death takes place suddenly from a gush of blood. Hæmatemesis is, however, not nearly so common as hæmoptysis. Dysphagia may also be of reflex origin from spasm of the pharynx. Pressure on the pneumogastric nerves setting up irritation may give rise to various dyspeptic symptoms, such as vomiting and flatulence. In like manner irritation of the phrenic nerve may cause hiccough.

VI.—*Paralytic Symptoms.*

Paraplegia is a rare complication of aortic aneurysm, but it may occur as a result of erosion of the vertebræ and direct pressure of the aneurysmal sac upon the spinal cord, or it may come on suddenly as a result of pressure by the dislocated vertebræ. A specimen in the Westminster Hospital Museum[31] (No. 696) illustrates the first condition. Here the bodies of the eleventh and twelfth dorsal and first lumbar vertebræ have been almost completely destroyed, together with the intervertebral cartilages. The patient, a man, aged 45, had suffered from severe and paroxysmal pain in the back, followed by wasting and loss of power in the legs. The knee-jerks were absent. The cause of the paraplegia was not diagnosed during life.

A case recorded by Dr. H. G. Turney and Mr. C. A. Ballance[32] is an example of the sudden onset of paraplegia in a man, aged 35, due in all probability to pressure by the dislocated vertebræ. The aneurysm had eroded the sixth dorsal vertebra, and had practically destroyed the seventh. There was considerable destruction of the eighth dorsal vertebra and erosion of the ninth. The difficulty of the recognition of the aneurysmal origin of these cases of paraplegia is very great. Indeed, in these deep-seated aneurysms I fail to see how it is possible to do more than suspect the existence of an aneurysm. As the authors I have just quoted say, "the chances seemed to be in favour of a growth." My own experience would strongly support this view. I have seen quite a number of cases in which persistent pain in the back has eventually proved to be due to malignant disease. Hemiplegia, with or without aphasia, may result from the detachment of a thrombus from the wall of the sac. In one of my private cases left hemiplegia was noted 24 hours before death occurred.

VII.—*General Symptoms.*

The pain and consequent loss of sleep and the general misery caused by an intrathoracic aneurysm usually result in considerable loss of flesh. Emaciation may be more directly brought about by pressure on the œsophagus preventing the entry of food into the stomach; or an enlarging aneurysm may compress the thoracic duct causing engorgement of the absorbent vessels and glands, and leading to great interference with nutrition. In some cases the loss in weight is rapid.

The sister for many years in charge of the male medical wards at the Westminster Hospital, a nurse of large experience, has pointed out to me that there is something very characteristic in the position an aneurysmal patient assumes in bed. When he is at his ease he will sit up in bed with the knees drawn up, arms forward, shoulders slightly raised, and the head bent forward, and he will say that he breathes more comfortably in this position. This contrasts with the attitude commonly assumed by the advanced cardiac case; he is usually more comfortable with the legs over the side of the bed and the head reclining on one side of the pillow.

PHYSICAL SIGNS.

It is a trite saying that more mistakes are made from want of looking than from want of knowing, and in no complaint is this more true than in aneurysm. In this disease the indications are frequently so obscure that a very careful and systematic examination is necessary to detect the existence of a deep-seated aneurysm, and in some cases, in spite of the utmost care, no certain diagnosis can be made. These remarks are my apology should the directions for examination of the patient be considered of too elementary a nature by the audience I am addressing. In the first place a very careful inspection should be made of the patient in a good light, so as to notice any lividity of the lips and the condition of the pupils. Enlarged glands in the neck should be sought for as possible indication of malignant or tuberculous disease rather than aneurysm. Then the state of the pulse should be tested as regards tension, force, frequency, and regularity, and the two pulses compared in order to detect any inequality. The presence or absence of tracheal tugging or any displacement of the larynx should be noted. A careful laryngoscopic examination should be made, and the presence of recurrent paralysis, on the left side especially, should be regarded as presumptive evidence of aneurysm, unless the paralysis can be explained otherwise satisfactorily. The patient's chest should now be bared, and it should be examined while the patient is sitting and

in the recumbent position. It is also advisable to look at the patient sideways, as by this means it may be possible to detect a swelling which might otherwise have been overlooked. Any tumour, bulging or flattening of the chest, or defective movement should receive attention. The situation of the impulse of the heart should be looked for and any unusual pulsation noted; these observations should be confirmed by palpation. On inspection any enlargement of the superficial veins can be recognised, and, if present, the direction of the blood current should be determined. Distension of the superficial veins may be brought about by compression of the great veins—i.e., of the superior or inferior cava, or of one of the subclavian veins. Where there is a direct communication between the aneurysmal sac and the superior vena cava cyanosis is very pronounced, often amounting to a purple or black discolouration.

In connexion with pressure on the veins the occurrence of œdema should be mentioned. It is more marked in cases of malignant disease than in aneurysms, but I have seen very extensive œdema resulting from the pressure of an aneurysm. In one of my hospital patients there was very great œdema limited to the left shoulder and arm. In extreme vascular obstruction from the pressure of a large intrathoracic aneurysm, gangrene of the fingers has occurred. Pressure upon the brachial plexus may give rise to wasting almost always confined to one arm. Clubbed fingers have been noticed in some forms of aortic aneurysm. Inspection should not, therefore, be limited to the chest, but it should also embrace the head and extremities in its purview. In cases in which there has been pressure on the left bronchus, or where there is a pleural effusion, inspection may reveal loss of movement on the affected side.

Palpation affords valuable assistance in diagnosis, but it must be practised very carefully, as by rough handling thrombi may be detached and give rise to cerebral embolism. In aneurysm of the first part of the arch a pulsation may be recognised at a very early period of the disease; indeed, the patient himself may be the first to direct attention to this condition. Very commonly the pulsation has an expansile character. When the aneurysm springs from the transverse or descending parts of the aorta, pulsation is a late sign or may be wanting altogether. At times a pulsation, not otherwise recognisable, may be detected by grasping the chest anteriorly and posteriorly and exercising a certain amount of pressure. Dr. Herbert French [33] points out that in cases in which there is a doubt as to the presence of pulsation the "direct application of the ear to the part in such a way that the pinna is in uniform contact with the patient's skin, will sometimes bring pulsation to the notice very clearly when its amount, appreciable to the membrana tympani, is too slight for the hand to detect; this applies particularly to deep-seated intrathoracic aneurysms."

The absence of pulsation over a dull area arising from a subjacent aneurysm may be owing to the filling up of the sac with clot or simply to a feeble ventricular systole. The diastolic thud or shock, which I shall mention under auscultation, may be recognised on palpation. A thrill is not common in aneurysm and is not of diagnostic importance. When present it is almost always systolic, but Dr. Parkes Weber [34] has exhibited a patient with aneurysm of the first part of the arch of the aorta in whom a diastolic thrill could be demonstrated. Dr. Seymour Taylor [35] has, however, a high opinion of the diagnostic value of thrill. According to him, the existence of a thrill is a fairly conclusive argument that an aneurysm exists. He also regards it as a prognostic sign, as he thinks that the presence of thrill is evidence that the sac has no laminated clot. On percussion the recognition of a dull area, where normally there should be resonance, is in itself of little value, but, taken in conjunction with other signs, it will materially assist the diagnosis. For instance, should there be dulness in the second right interspace, this would help to exclude disease of the aortic valve or mere dilatation of the aorta, and point to the presence of aneurysm. Less commonly dulness may be detected under the left clavicle. This was the case in a patient to whom I have already alluded. Very exceptionally an aneurysm of the descending thoracic aorta may come to the surface and cause loss of resonance on percussion in the interscapular region. The tricks played on percussion resonance by aneurysmal pressure on the main bronchus are very extraordinary. There may be at one time such distension of the lung with hyper-resonance on percussion as to suggest the existence of pneumothorax, and later, owing to the absorption of the air in the lung, the percussion note may become quite dull.

Various conditions resulting from aneurysm may give rise to dulness, as Dr. Newton Pitt pointed out in his Bradshaw lecture. The most important are collapse of lung, the so-called retention pneumonia, dilatation and filling of the bronchial tubes with secretion, fibroid thickening of the lung, pleurisy, and empyema. A single or a double murmur may be heard over the aneurysm, or there may be no murmur at all. The systolic murmur may be due to changes in the aortic valve or produced by the blood entering the aneurysmal sac. As regards the diastolic murmur, I am convinced that in the great majority of cases, if not always, it is the result of aortic regurgitation, and is not produced at the orifice of the sac. The narrower the opening into the sac from the aorta the louder, as a rule, will be the murmur. Hence, a loud murmur is of rather favourable import, as the narrower the opening into the sac the greater is the probability of cure.

By far the most reliable auscultatory sign is the accentuation of the aortic second sound, sometimes amounting to a distinct thud or shock. In opening a discussion on Aneurysm at the Medical Society of London in 1889 Sir Richard Douglas Powell,[36] in speaking of this sound, said: "When once heard—and it is doubtless familiar to all here—it cannot be mistaken, and it is, I believe, absolutely diagnostic of sacculated aneurysm. It is, however, by no means heard in all cases of sacculated aneurysm, requiring certain conditions for its production. It is certainly not well heard, some deny that it is heard at all, except in aneurysm of the first or second portion of the arch; and thirdly, the aortic valves must be competent, or but very slightly defective." For the due recognition of this sign a rigid stethoscope is necessary.

Dr. Sansom [37] has pointed out that a systolic murmur, too feeble to be easily recognised in the ordinary manner, may be rendered distinctly audible by listening with a binaural stethoscope, the chest piece of which is placed in the patient's mouth with his lips closed over it. "Tracheal whiff may be heard either in the trachea or in the mouth; it is usually systolic, but may be double, and it is loudest when the patient is expiring slowly after a deep inspiration with the mouth wide open."[38] After careful auscultation over dull areas to detect the presence of murmurs or the diastolic shock, the condition of the lungs should be investigated. Feeble, absent, or stridulous breathing may be noted and bronchial breathing over dull areas, and added sounds due to bronchitis or congestion of the lungs may be heard. The presence of tracheal breathing or stridor, especially if combined with dysphagia, is very suggestive of aneurysmal pressure on trachea and œsophagus. Should one bronchus be compressed there would be diminished entry of air on the corresponding side of the chest, and in extreme cases there may be even entire absence of respiratory murmur over the affected side. If an aneurysm be the cause of pressure the left lung is the one generally affected. This is shown by the fact that out of 140 aneurysms collected from the post-mortem records of Guy's Hospital [39] 30 compressed the left bronchus, and 16 of these eroded into it, while only 5 compressed the right bronchus and none eroded it. Where the calibre of the bronchus is not completely obliterated the breathing may be of a stridulous character. As I shall mention under the head of Diagnosis complete occlusion of the left bronchus from the pressure of an aneurysm has given rise to signs closely simulating those of pneumothorax. In cases in which aneurysmal pressure has caused retention of secretion in the bronchial tubes moist sounds will be present, especially after coughing. But the whole subject of bronchial obstruction was so ably treated by Dr. Newton Pitt in the Bradshaw lecture for 1910 that it is unnecessary for me to say more on the subject.

Bibliography.—1. THE LANCET, Feb. 21st, 1903, p. 515. 2. Quoted by Osler, Allbutt and Rolleston's System of Medicine, vol. vi., p. 624. 3. Brit. Med. Jour., 1908, vol. i., p. 1405. 4. THE LANCET, August 9th, 1902, p. 358. 5. Aneurysms of the Aorta, by Dr. Oswald Browne, H. K. Lewis, 1897. 6. Vorlesungen, vol. i., p. 290. 7. St. Bartholomew's Hospital Reports, vol. xxx., p. 1. 8. Proceedings of the Medical Society of London, vol. ix., p. 195. 9. Reynolds's System of Medicine, vol. v., p. 23. 10. Principles and Practice of Medicine, vol. ii., p. 104. 11. Proceedings of the Medical Society of London, vol. ix., p. 203. 12. Transactions of the Clinical Society of London, vol. xxxiii., p. 1. 13. Proceedings of the Medical Society of London, vol. xxviii., p. 311. 14.

Ibid., vol. ix., p. 195. 15. THE LANCET, May 9th, 1903, p. 1361. 16. Transactions of the Royal Medical and Chirurgical Society, vol. lxxxii., p. 107. 17. Transactions of the Medical Society of London, vol. xiii., p. 118. 18. Lectures on the Practice of Physic, second edition, vol. ii., p. 296. 19. Lectures on Pathology, p. 259. 20. Bradshaw Lecture, p. 6. 21. Dr. Drummond, Brit. Med. Jour., 1908, vol. i., p. 1408. 22. Ibid. 23. Monthly Journal of Medical Science, 1853, vol. xvi., p. 114. 24. See case reported by Dr. Whipham, Transactions of the Clinical Society of London, vol. xiv., p. 197. 25. Westminster Hospital Reports, vol. ii., p. 97. 26. Journal of Laryngology 1904, p. 458. 27. Proceedings of the Medical Society of London, vol. ix., p. 195. 28. Proceedings of the Laryngological Society, vol. ii., p. 27. 29. Transactions of the Royal Medical and Chirurgical Society, vol. viii., p. 32. 30. Proceedings of the Laryngological Society, vol. ii., p. 20. 31. Westminster Hospital Reports, vol. vi., p. 115. 32. Transactions of the Royal Medical and Chirurgical Society, vol. lxxxii., p. 125. 33. An Index of Differential Diagnosis, p. 764. 34. Royal Society of Medicine, May 31st, 1912. 35. Proceedings of the Medical Society of London, vol. xxiv., p. 61. 36. Ibid., vol. xiii., p. 123. 37. Twentieth Century Practice of Medicine, vol. iv., p. 500. 38. Drummond: Brit. Med. Jour., 1908, vol. i., p. 1408. 39. Dr. Newton Pitt: THE LANCET, Dec. 10th, 1910, p. 1675.

The Arris and Gale Lectures

ON

THE GENITAL FUNCTIONS OF THE DUCTLESS GLANDS IN THE FEMALE.

Delivered at the Royal College of Surgeons of England on March 10th and 12th, 1913,

BY W. BLAIR BELL, B.S., M.D. LOND., M.R.C.S. ENG., L.R.C.P. LOND.,

GYNÆCOLOGICAL SURGEON TO OUT-PATIENTS, ROYAL INFIRMARY, LIVERPOOL; EXAMINER IN GYNÆCOLOGY AND OBSTETRICS TO THE ROYAL COLLEGES OF SURGEONS AND PHYSICIANS, LONDON; AND TO THE UNIVERSITY OF DURHAM.

LECTURE I.

Delivered on March 10th.

MR. PRESIDENT, LADIES, AND GENTLEMEN,—I must first of all thank you for appointing me to deliver these lectures, and say how much I appreciate the opportunity they afford of bringing before you the results of some recent researches in which I have been engaged.

INTRODUCTION.

Although the subject I have chosen for these lectures is one in which I have been interested for some years, both clinically and experimentally, this is the first time I have attempted to present a general, if incomplete, outline of the intricate details which I believe justify the title I have adopted. But now that I have taken the matter in hand, and have got together my available material, I feel dismayed at the prospect before me.

Any attempt to describe the special correlated functions of the ductless glands, or, to be more exact, of the internal secretions, appears to be avoided by those who have worked most at the subject. Correlations are admitted, points in support of them are produced, and the matter is then dropped. In many ways this is much to be deplored, for to some extent it is accountable for the present disordered condition of our knowledge. It is disappointing to read through such a fine work as that of Biedl on the Internal Secretory Organs, and nowhere to find an attempt to link up—if only from an analysis of the isolated facts of work already done—the mysterious connexions that undoubtedly exist between the ductless glands in regard to the specialised functions. In Marshall's recent work on the Physiology of Reproduction two short pages only are set aside for the consideration of the relation of the ductless glands generally to the reproductive functions. No doubt this diffidence is due partly to the incomplete state of our knowledge; but I think it arises more directly from the isolated way we consider most of the structures in the body. We trace the products of metabolism from organ to organ without taking into consideration the fact of what I may best describe as organic harmony between various structures themselves.

I do not wish it to be inferred from these remarks that I am in any way prepared to give in these lectures a complete explanation of the interactions of the ductless glands in regard to the genital functions. It would be impossible in the time at my disposal, even had I the knowledge, which I certainly have not. I do, however, wish to call attention to the fact that the genital functions in the female must be considered from a very wide standpoint in view of our accumulated knowledge concerning them. I shall deal most fully with those parts of the subject on which I have myself worked, and I shall bring forward experimental results to clear up some of the points at issue. Unfortunately, I have still much to do, and much that is not yet complete. The other parts of the subject I shall briefly allude to in order to complete the picture.

My endeavour will be to emphasise, if I can, the importance of all the internal secretions in the special economy of the female. So that those who are interested in gynæcology may come, if they have not already done so, to look upon all the ductless glands as genital glands—not, of course, exclusively so, nor all in the same way in a metabolic sense; but rather that each is absolutely indispensable to the harmony of the genital functions, which are, therefore, not solely dependent on the functional activity of the special genital gland.

Until recent years attention centred round the ovary as if it were the only controlling factor in the genital processes. I shall, therefore, first consider the functions of this organ.

THE FUNCTIONS OF THE OVARY.

These are: to provide ova and to produce an internal secretion or secretions. We need not consider further the liberation of the ova.

The internal secretion of the ovary has never been isolated. Indeed, it is still a matter of considerable dispute as to how and where it is produced. The only evidence that there is an internal secretion rests upon the results of extirpation and destruction experiments, and to a lesser degree on clinical observations. The resulting atrophy of the uterus is taken to indicate the loss of some secretion which normally activates this organ. Some believe that there is more than one secretion, and various authorities have considered that different secretions are produced by the lutein cells of the corpus luteum, by the interstitial cells of the stroma of the ovary, and by the membrana granulosa cells; but that they differ in the degree of importance to be ascribed to each.

Prénant, and later Born and Fränkel, were probably the first to call attention to the importance of the lutein cells; and the last named showed that destruction of these cells led to abortion in pregnant rabbits. Hick and I, and many others, invariably produced abortion by the removal of both ovaries in these animals.

It has been supposed that the corpus luteum provides a secretion which assists in maintaining the position of the embedded ovum intact. Experiments on animals seem to support this view; but cases in the human subject are on record in which both ovaries have been removed during the first few weeks of pregnancy for such discrete tumours as fibromata, without interrupting the course of gestation. And herein lies one of the great difficulties in the study of our subject; different orders of mammals have organs of internal secretion which are structurally and even functionally different, although perhaps in degree only. Individuals in the same species may vary, both in animals and in man. Consequently, some of the contradictory statements made by different experimenters may be explained on the ground of these variations.

It may be, then, that the secretion of the corpus luteum in women is much less important for the normal implantation of the ovum than it is in rabbits. I am at present engaged in studying the question from a morphological standpoint, for this method of investigation seems most likely to offer some solution of many of the difficulties in regard to the corpus luteum.

In marsupials the attachment of the ovum is most primitive, and one would expect to find a correspondingly unimportant corpus luteum. I have as yet had no opportunity of examining the ovary of a member of this order of mammals. The ornithorhynchus, in which th young is born in an egg and consequently is never attached to the mother, has a somewhat remarkable corpus luteum. I have not seen a very recent one, but in those in the specimen I have examined there is an enormous deposit of fibrous tissue around what I take to be the lutein cells. (Fig. 1.) Ultimately the whole becomes a ball of fibrous tissue. (Fig. 2.)

One might be led to expect that the higher one went in the scale of evolution the more important would become the corpus luteum—that in woman it would be more active than in the rabbit and other lower mammals. But evolution does not necessarily entail the advancement of every structure; some atrophy, and all are dependent for their development upon the necessities of the particular species. In carnivora and in rodents there is an actual embedding of the ovum. In ungulates the placental attachment is merely one of apposition, and there is no invasion of the maternal tissues as in rodents, carnivora, the primates, and women. Yet anyone who has seen the corpus luteum of an ungulate must feel impressed by its active appearance—both macroscopical and microscopical.

Such facts are bewildering, and I think the conclusion we must draw provisionally is that, if the corpus luteum be an organ of internal secretion which assists the implantation of the ovum, the importance of it varies with different species, and probably it has more than one function. I have dwelt on our difficulties in regard to the corpus luteum, for we encounter the same difficulties and variations throughout this subject in our search after definite information.

The interstitial cells of the ovary, also, have attracted much attention, and they, too, are believed to possess a special internal secretion. Limon first compared the ovaries of many species of mammals, and found an enormous difference in the preponderance of interstitial cells to be found in the different ovaries.

Everyone is familiar with the structure of the human ovary (Fig. 3) and the obvious scarcity of secretory cells—apart from those connected with the follicles. But if we examine the ovary of an adult rabbit, or any other rodent, we see a most remarkable structure. The whole organ is composed of a mass of cells which are epithelioid in character (Fig. 4). And still more remarkable is the appearance of the corpora lutea, the cells of which can only be distinguished, if at all, from the cells of the stroma by their larger size. The Graafian follicles are crowded round the periphery of the ovary as though pushed outwards (Fig. 5).

What does this extraordinary appearance indicate? From very close observation of the corpora lutea in all the stages of development I have come to the conclusion that they do not undergo involution in rodents as in the higher mammals, but that they ultimately form the so-called interstitial stroma cells. Often one can see the cells of the corpus luteum merging into the similar cells in the stroma of the ovary. (Fig. 6.)

If we examine the ovaries of rabbits a few weeks old we find them composed entirely of primordial ova and a few follicles, separated by bundles of connective tissue. There is an entire absence of interstitial cells. (Fig. 7.) This also indicates the probability of the origin of these cells from corpora lutea, although it is possible that in the human ovary, and in the ovaries of animals which contain very few interstitial cells, these arise from the capsular epithelium, or possibly from special stroma cells.

Thirdly, there are the Graafian follicles with their linings of membrana granulosa cells, to which some attribute an internal secretion. In favour of this view I shall adduce some evidence later.

The question now arises whether we are justified in assuming that there is only one type of secretory cell in the ovary. If we were to put aside the liquor folliculi as an internal secretion, I do not think we should be wrong in assuming that the interstitial cells and the corpus luteum have the same function, especially if we believe that they are derived from the same source. In experimental

TABLE I.—*Removal of Ovaries. Averages of Metabolism Estimations of 24 hours' Specimen Urines Before and After Operation.*

Cat No. 1.

Date.	No. of spec.	Specific gravity.	Diacetic acid.	Acetone.	Albumin.	Sugar.	Indican.	Ca %.	Cl %.	P_2O_5 %.	Total N %.	Urea %.	NH_3 %.	Ammonia coefficient. Urea N %.	NH_3 N %.	Undet. N %.
Commenced 3/1/12	10	1022	0	0	0	0	3 times	0·0089	0·071	0·224	1·92	3·77	0·115	90·29	5·20	4·51
Operation 24/1/12																
Destroyed 2/5/12	23	1045	0	0	0	1	5 times	0·003	0·118	0·550	4·75	9·42	0·247	92·54	4·30	3·16
Cat No. 3.—Removal of Ovaries.																
Commenced 3/2/12	6	1029	0	0	0	Once	Twice	0·005	0·205	0·317	2·93	5·74	0·226	90·83	7·24	1·93
Operation 13/2/12																
Destroyed 5/10/12	21	1042	Once	0	0	Once	10 times	0·0026	0·148	0·527	4·43	8·79	0·293	92·82	5·21	1·97
Cat No. 4.—Removal of Ovaries.																
Commenced 17/2/12	3	1030	0	0	0	0	0	0·006	0·293	0·411	3·38	6·82	0·331	89·04	7·02	3·94
Operation 21/2/12																
Destroyed 23/10/12	31	1033	0	Once	Once	0	7 times	0·0026	0·158	0·476	4·35	8·48	0·361	90·91	6·79	2·30
Cat No. 5.—Removal of Ovaries.																
Commenced 4/3/12	7	1053	0	0	0	0	4 times	0·004	0·161	0·335	6·60	13·13	0·646	92·78	3·74	3·48
Operation 13/3/12																
Destroyed 6/11/12	22	1047	0	0	0	0	16 times	0·0018	0·170	0·582	3·89	6·38	0·605	77·67	13·0	9·12
Cat No. 6.—Removal of Ovaries.																
Commenced 1/4/12	5	1044	0	0	0	0	4 times	0·0016	0·216	0·433	4·10	8·16	0·295	92·88	5·80	2·32
Operation 12/4/12																
Destroyed 6/11/12	23	1047	0	0	Once	0	10 times	0·001	0·140	0·575	5·49	9·96	0·472	84·51	6·94	7·89
Cat No. 7.—Removal of Ovaries.																
Commenced 12/4/12	9	1050	0	0	0	0	4 times	0·0015	0·131	0·602	2·05	3·94	0·207	89·21	8·26	3·04
Operation 26/4/12																
Destroyed 20/11/12	19	1044	0	0	3 times	0	3 times	0·001	0·126	0·599	4·81	9·25	0·681	89·83	5·22	5·14
Average of above Estimations. *From Six Cats before and after Removal of Ovaries.*																
Before operation	7 approx.	1038	0	0	0	Once	17 times	0·0043	0·174	0·387	3·49	6·92	0·311	91·17	6·31	3·22
After operation	23 approx.	1042	Once	Once	5 times	Twice	51 times	0·002	0·142	0·551	4·60	8·70	0·442	88·16	6·91	4·92

investigations of the ovarian functions we have no means of separating the various parts of the ovary, and can, therefore, only estimate the total function.

My own experiments have been carried out on dogs, cats, and rabbits. As already stated, the ovaries of the carnivora resemble in structure the human ovary more closely than is the case with the ovaries of rodents. The methods of investigation have consisted in noting the effects of oöphorectomy on the pregnant and non-pregnant uterus, on the other ductless glands, and on the general metabolism of the body.

EFFECTS OF OÖPHORECTOMY ON THE GENITAL FUNCTIONS.

Hick and I pointed out some years ago that the effect of oöphorectomy on the non-pregnant uterus was to produce first of all atrophy of the muscular coats. Fig. 8 shows the normal uterus of the cat with its two muscular coats, and Fig. 9 that of a cat 245 days after oöphorectomy. We concluded that the normal muscular contractions were abolished and atrophy supervened, especially in the circular muscular coat. This has been confirmed and accepted by Marshall and others. The total ovarian secretion exercises a somewhat remarkable experimental effect on the uterus. Hick and I have found that when injected intravenously it caused contractions in the œstrous uterus of the rabbit, but inhibited the contractions of the pregnant uterus. We have, however, not always been able to produce the latter result.

Recently I have investigated the important question whether the metabolic conditions of the body are materially altered by oöphorectomy or not.

EFFECTS OF OÖPHORECTOMY ON THE GENERAL METABOLISM.

In the early part of last year I removed the ovaries of six cats which were kept for periods ranging from 139 to 251 days. The urine was collected and fully examined at frequent intervals, both before and after operation.

In Table I. a number of records are brought together which represent the averages of the 24 hours' specimens of urine

FIG. 1.

Ovary of ornithorhynchus. Recent corpus luteum. F, Fibrous theca. G, Remains of membrana granulosa cells. L, Lutein cells. × 150.

collected, and examined before and after operation. I have had the tables worked out in this way, as it seems the best for indicating the general results. All metabolism experiments require most careful handling, and I think my records clearly show why contradictory results have been obtained by various observers dealing with insufficient material. As I have already stated, there are both normal and abnormal individual variations in animals, just as there are in women under apparently similar circumstances. My animals were all kept together and fed on the same food. The urines were collected in special metabolism cages—not all on the same days, of course, owing to the number of cages being limited.

With regard to the details to be found in these tables. First, it will be noticed that though we have records of the daily total quantities of urine collected this is not stated. The reason for this is that it is rarely possible in an ordinary way to make sure of collecting all the urine. Secondly, animals, unlike women, do not pass a uniform quantity of urine daily. Consequently I have thought it more scientific to give the specific gravity and deal in percentage quantities rather than total amounts. All these estimations have been carried out in the Bio-chemical Laboratory in the University

FIG. 2.

Ovary of ornithorhynchus. Corpus fibrosum. × 150.

of Liverpool by my chemical assistant, who is an impartial paid chemist, trained in this kind of work.

It will be seen on looking over these tables that the specific gravity was higher after operation than before in half the cases. This, of course, would lead us to expect a larger proportion of solids in the latter period of observation, and this is more or less borne out except in the case of cat No. 7.

Since there was some irregularity in the individual results, and as we had a sufficient number of animals, an average estimation of all six cases has been worked out. (Table II.) From this we have drawn our conclusions.

It will be noticed first of all that there is not a great difference in the averages of the specific gravities before and after operation.

The calcium excretion is diminished by one-half. The chlorides are slightly diminished. The phosphorus excretion is much increased, as are the total nitrogen and urea percentages. The ammonia is slightly increased. It will be seen that there is no real change in the ammonia coefficient.

Knowing as we do the marked changes in the nitrogen metabolism which normal animals undergo, I do not think we can look upon the changes recorded in regard to the nitrogen as of much importance.

The increased phosphorus excretion is somewhat curious in view of the definite decrease in the excretion of calcium.

I have always held the view that the ovaries take an active part in promoting the excretion of calcium, especially in connexion with menstruation. These experiments show that removal of the ovaries lessens the urinary excretion of calcium by one-half.

McCrudden, relying on two carefully planned experiments in which the composition of the food taken in was known and compared with the subsequent excretion in the fæces and urine, states that he found an increased calcium excretion after oöphorectomy. At first sight his experiments appear flawless. But an examination of his tables reveals figures which require considerable explanation. In the first place, it seems incredible that each animal ate to the fraction of a gramme the same amount of food in the same number of

days before and after operation. Further, of his two bitches, weighing 13 lb. and 16 lb. respectively, the former excreted a total of 0·529 grm. of CaO in 20 days before operation, and 0·532 grm. after operation in the same period. The second, however, excreted 6·745 grm. of CaO in 20 days before operation, and only 1·869 grm. in the same time after operation. Surely these are extraordinary figures on which to found his conclusions; for the last animal excreted after operation about one-sixth of the amount of CaO that it did before. This is confirmatory with my figures, and diametrically opposed to his own statements.

Louise McIlroy, working with a somewhat similar method only on one animal, also states that the output of calcium is increased after oöphorectomy. Other unpublished work by this investigator which she has been good enough to communicate to me privately supports my conclusions regarding menstruation and the calcium metabolism.

Curatulo and Tarulli, also Neumann and Vass, found a reduction in the excretion of calcium and phosphorus after administering ovarian substance. Falk and Schulz could find no change in the metabolism after administration. Heymann found reduction in the phosphorus content of the bones of rats after oöphorectomy.

I may, perhaps, be allowed to recapitulate a few other facts which afford evidence contributory to the view that the ovaries are concerned in promoting calcium excretion. During pregnancy and lactation the function of the ovaries is in abeyance in regard to menstruation, and at these times first the fœtus, and then the breasts, utilise all the available calcium; indeed, the mother's tissues are sometimes drawn upon to her detriment.

With regard to the mammary secretion, although it is so intimately connected with the genital functions, I look upon it as of subsidiary importance. That is to say, the secretion of milk is produced by a special arrangement of the general metabolism in response to various hormones connected with the necessities of the occasion. In women there is sometimes no response. I do not propose to discuss lactation in these lectures, since it is one of the side issues, and the metabolic processes connected with the production of milk are comparable with those which provide for the building up of the fœtus in the uterus. It is a process with which all the ductless glands are directly or indirectly concerned. In saying this I do not intend to underrate its importance, but time will not allow for the full discussion of every detail connected with the functions under discussion.

Osteomalacia, about which I shall have more to say presently, has often been cured by the removal of the ovaries, and this result indicates a condition of calcium retention in the tissues. My experiments are therefore supported by clinical observations.

We know quite well, of course, that from a casual inspection of animals which have undergone oöphorectomy we can detect no outward change except some degree of adiposity, yet apparently there is a constant metabolic disturbance in regard to the calcium retention and increased phosphorus excretion as shown by the urinary analyses. On the other hand, we know well from our clinical experience that outward changes of a marked character may occur in women in whom an artificial menopause has been induced by oöphorectomy. At the same time it has been a matter of very lively speculation why one woman should suffer all manner of evils when her ovaries are removed and another suffer very little. And this is another reason why experimentation on animals has to be very carefully considered. The metabolism of women is much more easily disturbed than is that of the lower animals, and psychoses and neuroses, which are not observed after oöphorectomy in the latter, are often the source of the greatest distress in women.

But we shall see that, in addition to certain constant and positive results which are always reliable in regard to the metabolism, experimentation provides us with other most useful information, and this information is just that which we cannot obtain in our clinical work, although it may be at the bottom of many obscure phenomena. I refer to the effects produced on the other ductless glands by removal of the ovaries. No doubt the differences in the effects of oöphorectomy in women, just alluded to, are largely dependent upon the individual variations that we know exist with regard to the adjustments of the internal secretions, and are evidenced by the outward characteristics of adiposity and thinness, lethargy and brightness, and many other physical and psychical attributes. So that it is clear that if one woman be better adjusted than another against the removal of the ovarian secretion she will show less signs of the menopause. Animals do not vary in the same way. They all seem to have a remarkable power of readjustment. But with the higher psychical evolution of woman it is not surprising that removal of the ovaries often causes a severe alteration of temperament.

It has been supposed that the changes that occur in other members of the ductless gland system after removal of one of their number are in some cases compensatory, and consequently that disturbances in the body metabolism may thus be made good or prevented.

EFFECTS OF OÖPHORECTOMY ON THE THYROID.

If one were to select any other order of mammal than the rodent one would come to the conclusion that any alteration in the functional activity of the thyroid after oöphorectomy was of little or no importance in so far as histological evidence was concerned. For instance, in the cat I have been unable to detect any material difference after oöphorectomy in the thyroid itself or in the parathyroid. But if one compares the thyroid of a normal female rabbit with the thyroid of the same animal after removal of the ovaries, one sees a very different picture.

The thyroid of the normal non-œstrous and non-pregnant female rabbit is not a very active organ in so far as the production of colloid is concerned. But after removal of the ovaries there is great distension of the vesicles, which are filled with colloid. Further, it will be noticed that the colloid is basophile in character and stains blue with hæmatoxylin instead of pink with eosin; whereas the normal thyroid colloid is, of course, acidophile and stains with eosin. Before attempting any explanation of the changes in the thyroid after oöphorectomy, we must not forget that this organ in the pregnant rabbit shows a relatively great increase in the amount of colloid, but that it is then eosinophile in character.

This is not the place to discuss the significance of the normal colloid collections in the vesicles, as opposed to the absence of colloid seen in conditions associated with excessive function. But there can be little doubt that the normal thyroid of the non-pregnant rabbit is not a very active structure, because removal causes little or no disturbance, an observation I have myself made on many occasions. On the other hand, in pregnancy, when it is well-known that increased thyroid activity occurs, we see, as just stated, that the colloid content is increased to a considerable extent in these animals.

It may, then, safely be asserted that there is a considerable increase in functional activity of the thyroid of rodents after oöphorectomy. Why the colloid should be basophile instead of eosinophile we can only conjecture. I have carefully considered the question of an artefact, but I think this must be rejected for many reasons, into which I need not enter here. We are, however, assisted in our attempt to arrive at a conclusion by observations made on the pituitary body, some of which will be referred to more fully later.

The normal colloidal secretion of the anterior lobe and pars intermedia of the pituitary is basophile, but under conditions of increased activity it may be eosinophile. Further, like the thyroid, in a condition of greater hypophysial activity, no colloid is formed, but the secretion is abstracted directly from the eosinophile cells. In conditions of the greatest activity of all—as I shall show later—the secretion is directly abstracted by the blood or lymph from faintly staining basophile cells—so-called cromophobe cells. There is, in fact, a cycle of events to be demonstrated in the hypophysis according to the needs of the moment.

It is probable, then, that the basophile colloid found in the rabbit's thyroid after oöphorectomy represents a storage secretion, which is formed to meet the altered conditions of metabolism, but which is not of a great degree of activity in this order of mammals.

As I have previously suggested, the inactive thyroid which is found in rodents is probably related to the very marked development of the interstitial cells in the ovaries of these animals. And, as a consequence, a marked reaction is produced in the thyroid of rodents by oöphorectomy, and not to the same degree in other mammals such as the carnivora.

EFFECTS OF OÖPHORECTOMY ON THE THYMUS.

Calzolari first showed that castration produced hypertrophy of the thymus. His experiments were carried out on rabbits. No work has been done in regard to women, but eunuchs have been found to possess thymus glands which have not undergone involution. It has also been noted by Marrasini and by Gellin that castration after genital activity has been established gives rise to enlargement of the thymus.

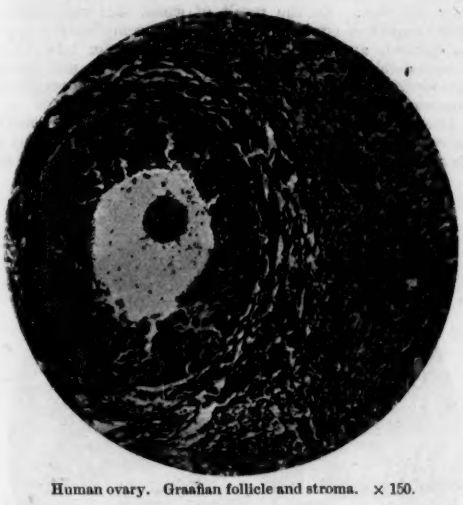
In my experiments on cats we found the thymus much larger after oöphorectomy than in the normal adult animal; and on section it appeared to resemble the normal gland in the active stage before puberty. The significance of this I shall discuss later when considering the thymus gland.

EFFECTS OF OÖPHORECTOMY ON THE PINEAL GLAND.

I have personally made no observations of the pineal gland after oöphorectomy. Indeed, very little physiological work has been done in this connexion.

Biach and Hulles published a paper last year in which they gave the results of castration of male and female kittens a few weeks old. The animals were kept from seven to eight months. These investigators arrived at the conclusion that atrophy of the pineal gland occurred in all cases. Other observers have been able to find no changes

FIG. 3.



Human ovary. Graafian follicle and stroma. × 150.

in this organ. Later on I shall consider the effect of pathological changes in the pineal on the genital functions.

EFFECTS OF OÖPHORECTOMY ON THE SUPRARENALS.

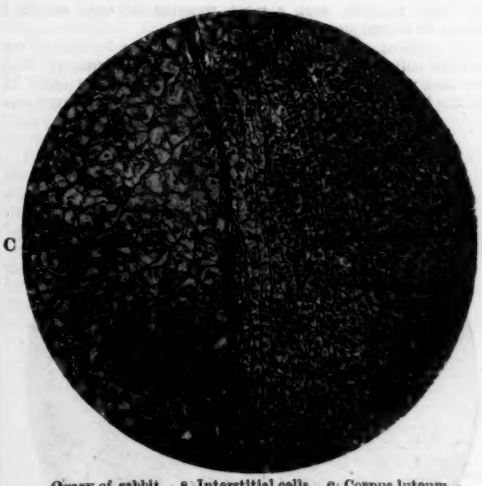
I have examined many suprarenals after oöphorectomy in rabbits and cats and have found that there appears to be a definite increase in the reticulated portion of the cortex at the expense of the zona fasciculata. What the interpretation of this is I cannot say.

CLINICAL OBSERVATIONS OF THE EFFECTS PRODUCED ON THE THYROID BY OVARIAN INSUFFICIENCY IN WOMEN.

No experimental finding in regard to the interrelationship of the internal secretions can be considered of real or practical value unless it be supported by clinical evidence. Indeed, it may be considered that experimental evidence concerning the functions of the ductless glands which, as I have already pointed out, are subject to individual variations, is most useful in giving us a lead in the interpretation of those difficult cases with which we may be confronted, but are now beginning to understand more fully. This understanding has been brought about by dovetailing our experimental results into our clinical experiences. A brilliant example of what may be accomplished along these lines is afforded by Harvey Cushing's recent work on the pituitary body.

What evidence have we, then, of a clinical nature concerning the correlation of the thyroid and ovary, in the circumstances under discussion—that is, with ovarian insufficiency? I have many times alluded, as have other writers, to the well-known enlargement of the thyroid in pregnancy. It is probable that normally this enlargement corresponds with that found after oöphorectomy, for in certain respects the ovary is quiescent during pregnancy. We know that this enlargement normally does not produce

FIG. 4.

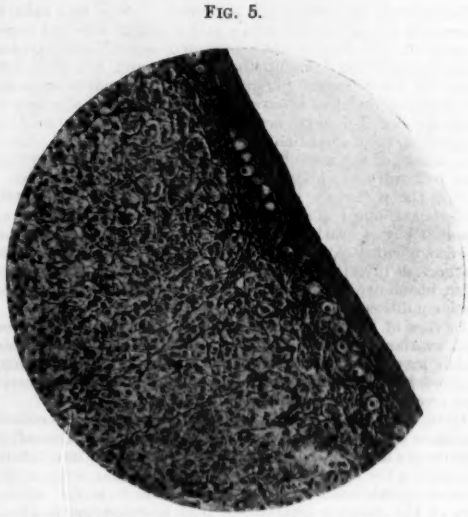


Ovary of rabbit. s, Interstitial cells. c, Corpus luteum. × 150.

the signs associated with exophthalmic goitre, but is, as I have already shown, due to excess of colloid material. At the same time, I have known more than one case of Graves's disease commence during pregnancy.

It is probable, also, that the enlargement of the thyroid seen in girls during menstruation about puberty is due to the incomplete state of development of the ovaries, and

FIG. 5.



Ovary of rabbit. Graafian follicles outside the interstitial cells. × 150.

histologically is the same in character as that occurring during pregnancy. I am not aware, however, that such a thyroid has ever been examined microscopically, for obvious reasons.

In addition to this we have other evidence of a pathological nature. No doubt many gynæcologists have had experiences similar to mine.

In one case, that of a married woman, aged 46, I removed both ovaries for cystic adenomata; on histological examination adenocarcinoma was found in a portion of one of the cysts, as is frequently the case when the patient is over 40 years of age. All went well for two months; then the patient developed slight enlargement of the thyroid. The condition passed rapidly into one of acute exophthalmic goitre from which the patient actually died within a year of the operation.

I have recently seen a most remarkable case which I believe to be unique.

The patient, aged 25, was referred to me by one of my medical colleagues at the Liverpool Royal Infirmary. She had been married for three years, and had had one child 11 months before she came under observation. The delivery was

FIG. 6.

Ovary of rabbit. Cells of corpus luteum (c) mingling with interstitial cells (s). × 150.

difficult and was effected with forceps. She was able to nurse the baby for a few weeks only owing to deficient secretion of milk. The patient presented herself with typical symptoms of early exophthalmic goitre, and her pulse-rate was 150 per minute. She had never menstruated since her confinement, but had always been regular before she became pregnant for 3–4 days *per mensem*. I found she had the somewhat rare condition of superinvolution of the uterus. The length of the uterine cavity measured under two inches. The left ovary was palpable and apparently not atrophied.

Now the pathology of superinvolution is not completely understood, but I think that there must sometimes be an insufficiency of ovarian secretion, even if it be not possible to recognise histological changes in the ovary by our present methods of investigation. At the same time, as we shall see later, insufficiency of other ductless glands may lead to the same condition.

In view of the facts recorded I think it is amply proved that ovarian insufficiency leads to changes in the thyroid which may either be of the type seen after experimental oöphorectomy—namely, colloid accumulation—or more rarely that represented by exophthalmic goitre.

Until we know a little more of the relation of colloid secretion to the excessive secretion without colloid formation that occurs in exophthalmic goitre, we cannot go into details concerning the exact pathological reactions that occur in the general metabolism. My own view is that it is the regulation of the calcium metabolism that is concerned in these changes. We have seen that oöphorectomy diminishes the output; and we know that the output is much increased in Graves's disease. So that this condition may represent a counter effect to ovarian insufficiency. This, at least, seems obvious, although I am fully aware that the changes in the thyroid may be merely the gross representation of a number of most intricate changes connected with growth, reproduction, and the life of the individual, in which all the ductless glands are concerned.

EFFECTS OF OÖPHORECTOMY ON THE PITUITARY BODY.

The close relationship between the pituitary body and the genital system has long been recognised, and I have made a number of observations of the effect of oöphorectomy on this intracranial organ.

The interpretation of the observations made necessitates the formulation of definite ideas as to what the changes observed may mean. We read of "hyperplasia," or of "increased inactivity" of the anterior lobe, which can convey little meaning to anyone until we have decided what are the appearances associated with increased activity and the reverse in the pituitary body. So far as I know, tentative views only have been put forward, and no very decided statements have been given concerning this complex and interesting organ.

As everyone knows, the pituitary consists of three parts: the pars anterior, the pars intermedia, and the pars nervosa. To each of these various portions, or perhaps more especially to the pars anterior and to the pars posterior—which consists of the pars intermedia and pars nervosa—have been assigned different functions. Authorities are still very much in disagreement concerning them.

Thus, we find that Harvey Cushing arrived at the definite conclusion, as the result of his experiments, that the anterior portion was largely concerned in the well-being of the genital organs and in the metabolism of the carbohydrates and bony skeleton. As the result of some, if I may say so, rather imperfect clinical observations he completely changed his opinion, and now asserts it is the posterior lobe which is responsible for the integrity of the genitalia, and for the carbohydrate metabolism. Bernhard Fischer had previously propounded this view.

After careful consideration and observation I have come to the conclusion that we must look upon the pituitary body as *one organ*, and not two. In this way only can we reconcile

FIG. 7.

Ovary of young rabbit. Primordial ova, Graafian follicles, and stroma. × 150.

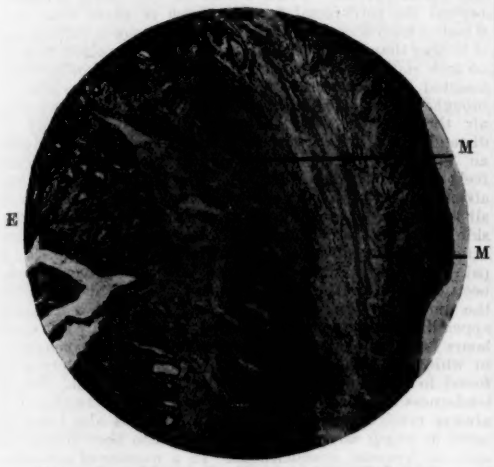
all the facts of experimentation and clinical observation. The secretion of the active chromophobe cells of the anterior lobe, such as are seen in pregnancy, is probably not different from that of the pars intermedia. And I believe that the secretion of the cells of the pars intermedia, which are developmentally the same as those of the pars anterior, may be regarded as pro-infundibulin, and that when it passes into the pars nervosa it becomes modified and acquires pressor qualities. In connexion with this passage of secretion into the pars nervosa there are many very important and interesting facts which are not actually concerned with our subject, so I refrain from discussing them here.

Next, we must come to some definite conclusion concerning the interpretation to be placed upon the remarkable differences in staining properties possessed by the cells of the anterior lobe. Although these variations in staining affinities

are well known, I must recapitulate them in order to explain my views concerning their meaning. The cells, then, of the anterior portion are chromophobe or chromophile—they stain indifferently or well. The chromophile cells are either eosinophile (acidophile) or hæmatoxylinophile (basophile). With eosin they stain red and with hæmatoxylin blue. The chromophobe cells stain lightly with hæmatoxylin.

There are two opinions held concerning this extraordinary grouping. The one, first put forward by Saint Rémy and Benda, finds expression in the belief that these appearances represent different phases of secretory activity. While the other opinion, propounded by Gemelli, represents the idea that each type of cell has a special secretion. My own view

FIG. 8.



Uterus of normal cat. M M, Muscle coats. E, Endometrium × 75.

coincides with the first suggestion, and after careful investigation I have come to the following conclusions regarding the cycle of events.

Firstly, the eosinophile cells represent the actively secreting cells, which ordinarily discharge their secretion into the blood-vessels or lymphatics. If there be no great demand for the secretion the cells may become basophile and enlarge. They gradually become darker until finally they discharge basophile colloid among the neighbouring cells, which may form a vesicle-like wall around it. After the discharge of colloid the basophiles become small shrunken chromophobe cells all with large nuclei in which a network of chromatin fibres can be seen.

In certain circumstances, as in pregnancy or after removal of the thyroid or suprarenals, there is immediate demand for secretion. Under these conditions the small chromophobe cells immediately regenerate into large chromophobe cells, and eosinophilia—a more leisurely process—does not occur to the usual extent. These large chromophobe cells have been called "pregnancy cells" owing to their constant appearance in the pars anterior during pregnancy. It is most important, too, in experimental work not to lose sight of the fact that the phases of secretory activity vary in different orders of animals, and that the large basophile cells and basophile colloid are not seen, so far as my experience goes, in mammalian orders below the carnivora.

Finally, it must be mentioned that the pars intermedia secretes colloid—normally basophile in reaction, but in some circumstances to be mentioned directly eosinophile. The colloid, which is formed in the pars anterior and pars intermedia, is probably a storage secretion, like the colloid seen in the thyroid. The more active method of secretion in both parts of the pituitary is intracellular. In the pars intermedia the cells swell up and become fused, and the secretion is, I believe, taken up straightaway by the blood or lymph. Some of the secretion of the pars intermedia and even the actual cells pass directly into the pars nervosa, whence absorption occurs, and it is in the pars nervosa, in my opinion, that the pressor qualities of infundibulin are acquired.

To return from this digression. Removal of the ovaries appears to exert a certain influence over the secretory functions of the pituitary body on the lines indicated. But in my experience the change is moderate and not quite constant. Thus in one experiment—cat No. 6 of my ovarian removal series—after an interval of 210 days there was no divergence from the normal to be recognised histologically.

I believe the effect is more or less temporary, and in no way comparable with the genital lesions seen after partial extirpation of the pituitary. In most of my cats, however, definite changes were found as long as 245 days after oöphorectomy. There was a large preponderance of eosinophile cells in the anterior portion. This shows activity, but not the great activity seen after thyroidectomy. In the pars intermedia the cells are fused and there are colloid vesicles and sometimes colloid cysts. This colloid stains with eosin, in contradistinction to the normal condition of basophilia.

It is interesting to note that the changes which occur in the pituitary with ovarian insufficiency are not comparable with those found in pregnancy. So that the relation of the pituitary body to the genital glands differs, in this respect at least, from the ovarian-thyroid relationship in similar circumstances. Fichera, however, believes that the "hyperplasia and hypertrophy" which follow oöphorectomy resemble the condition seen in pregnancy. Accordingly, he believes that the change in the anterior lobe in pregnancy is due to ovarian insufficiency. As already stated, I have seen nothing to lead me to adopt this view.

CLINICAL OBSERVATIONS OF THE EFFECTS PRODUCED ON THE PITUITARY BY OVARIAN INSUFFICIENCY IN WOMEN.

There is extremely little evidence of any absolute value in regard to this, partly owing to the inaccessible position of the pituitary body, and partly owing to the few attempts that have been made to investigate any possible changes present.

As we have seen, there is a peculiar and active state produced in the pars anterior and pars intermedia in pregnancy,

FIG. 9.

Uterus of cat after oöphorectomy. Atrophy of muscle coats. × 75.

but our evidence does not lead us to suppose that this is due to ovarian insufficiency. It is probably concerned with the fœtal metabolism, for, unlike thyroid enlargement, it appears to become more pronounced late in pregnancy.

The hemianopia that is sometimes seen during gestation has been attributed to the pressure produced by the enlargement of the pars anterior. And in the increased secretion of this portion of the pituitary some have sought to find an explanation of the enlargement of the hands and lower part of the face, also sometimes noticed during the period of pregnancy. But there is no evidence I know of that goes to show that the enlargement is skeletal. Indeed, it is usually merely a temporary thickening of the soft tissues, such as may be seen after oöphorectomy.

Again, because atrophy of the genital organs is associated with lesions of the pituitary, especially in the condition known as dystrophia adiposo-genitalis (Fröhlich), some authorities (Tandler, Gross, and others) have endeavoured to attribute the primary cause of the pituitary affection to the atrophy of the genital glands. But this is hardly to be believed on the present evidence at our disposal, and it is much more likely that the genital atrophy is subsequent to the pituitary lesion.

The facts I have brought forward in this lecture illustrate the influence of the ovaries on the uterus, on the general metabolism, and on the rest of the principal organs of internal secretion.

With regard to the influence of the ovary on the uterus we have seen that to some extent the implantation of the fertilised ovum is assisted—possibly by the secretion of the corpus luteum. Further, the activity of the uterus is maintained and regular contractions are promoted, probably by the secretion of the interstitial cells.

In the general metabolism the total ovarian secretion appears to promote the excretion of calcium and the retention of phosphorus. And lastly, total ovarian insufficiency arouses increased activity in most if not in all the other remaining ductless glands.

In the next lecture I shall endeavour to deal with the other side of the picture—the effect of the removal of the other members of the ductless gland system on the remaining members, and on the general metabolism in so far as it is directly related to the genital functions.

BASTEDO'S SIGN: A NEW SYMPTOM OF CHRONIC APPENDICITIS.[1]

BY ARTHUR F. HERTZ, M.A., M.D. OXON., F.R.C.P. LOND.,
ASSISTANT PHYSICIAN TO GUY'S HOSPITAL.

THE frequent occurrence of chronic appendicitis, often unaccompanied by acute attacks, is becoming more and more widely recognised. At first only cases in which chronic pain in the right iliac fossa was present were regarded as examples of this condition, but it is now known that the pain may be situated in the epigastrium alone, although in many cases it is characterised by radiating downwards and to the right. In most instances the pain simulates some gastric or duodenal disorder, as it develops soon after meals. I have, however, seen a number of cases in which the disease manifested itself as recurrent attacks of acute abdominal pain, colicky in nature, and situated in the neighbourhood of the umbilicus; the pain was quite independent of meals, was not associated with any rise in temperature, and its onset and disappearance from half an hour to five or six hours later were generally sudden. Sometimes, even in the absence of spontaneous pain in the right iliac fossa, there is distinct tenderness in this situation, which may be as great as, or greater than, that in the epigastrium. A characteristic symptom sometimes observed is the production by pressure in the right iliac fossa of epigastric pain, which simulates exactly the spontaneous pain from which the patient suffers.

In the majority of cases, however, a doubt must still be present as to the correct diagnosis, and any new sign which experience proves to be reliable must clearly be very welcome. Such a sign would also prove of great value in those cases in which doubt arises as to whether pain in the lower part of the right side of the abdomen is due to chronic appendicitis or to some disease of the right Fallopian tube or ovary, to a stone in the right ureter, and, when it is situated at a somewhat higher level, whether appendicitis or disease of the right kidney or the biliary passages is present.

In a paper read before the Medical Society of the county of Richmond, U.S.A., in March, 1909, Bastedo of New York described a sign which he believes is of great value in the diagnosis of chronic appendicitis under the conditions just described. Two years later he published a further communication on the subject,[2] and during the last few months papers have appeared by Rost,[3] Dreyer,[4] and Slawinski,[5] in Germany confirming his results. I have now employed the test in a large number of cases, and have found it of such great value that I am anxious that it should become more widely recognised, as it is simple to carry out, causes very little inconvenience to the patient, and is, in my experience, more reliable than any sign hitherto described.

The test depends upon the production of pain and tenderness in the right iliac fossa on inflation of the colon with air. For this purpose I use an ordinary rubber rectal flatus tube, which is connected by a short piece of glass to a pump, such as that used with the sigmoidoscope. Bastedo recommends that the tube should be inserted 11 or 12 inches into the rectum, but, as the experiments of Goodhart, myself, and others have shown that a tube can very rarely be passed beyond the pelvi-rectal flexure, which is never more than 6 inches from the anus, there is no advantage in introducing it further than just within the ampulla of the rectum—about an inch and a half from the anus. After the tube has been inserted the patient lies flat on his back, and the pump is brought up between his legs. On now slowly pumping air through the tube the colon is seen gradually to distend, and after a certain quantity has been introduced an individual who is not suffering from appendicitis feels a diffuse discomfort in the lower part of the abdomen, but there is no pain unless an excessive quantity of air is introduced, in which case it is not more marked on one side than the other. There is also no tenderness. Patients suffering from appendicitis, however, generally experience pain in the right iliac fossa, even if the pain has hitherto been confined to the epigastrium or the neighbourhood of the umbilicus. In one of my cases, in which a diseased appendix was subsequently removed, pain was only felt some hours later. Whenever pain is produced, and in some cases in which no pain has been felt, well-marked tenderness is found in the neighbourhood of McBurney's point. When tenderness has already been observed in this situation it is always much increased by inflation, but it is also found in cases in which no tenderness has hitherto been noticed in spite of frequent examinations. In a number of instances I have observed a further exceedingly characteristic symptom; the pain is referred to the epigastrium when pressure is exerted in the right iliac fossa after inflation, the epigastric pain being identical in character with that which formed the chief symptom of which the patient complained.

The test known as Rovsing's sign, although it had been employed for some years before Rovsing's first publication on the subject by Dr. Lauriston E. Shaw, in which pain is felt in the right iliac fossa on exerting pressure over the descending colon, has probably a similar significance to Bastedo's sign, as it appears to depend upon gas being pressed from the distal into the proximal part of the colon. It is, however, of very limited use, as it is comparatively rare for sufficient gas to be present in the descending colon. After the colon has been inflated in the carrying out of Bastedo's test, and the pain produced has disappeared, it can often be caused to return by pressing upwards along the descending colon, as in Rovsing's test.

In my own experience I have only obtained a positive Bastedo's sign in appendicitis, the appendix having always been found diseased at the subsequent operation, with the possible exception of one case, which is still too recent to form a judgment as to whether the removal of an apparently normal appendix will cause the symptoms to disappear. The only other case so far recorded in which appendicitis was not present was one in which Rost found that inflation of the colon gave rise to pain in the right iliac fossa, although the appendix had previously been removed. At the operation, which was subsequently performed, a band was found passing from the side of the cæcum, which was otherwise abnormally movable; in all probability the pain resulted from the pull of this band upon the distended and movable cæcum when the colon was inflated. In numerous cases in which the colon has been inflated and no pain or tenderness produced, the appendix has later been found to be healthy, and in some cases disease has been discovered in the female pelvic organs, the gall-bladder, or the kidney. In only two cases so far recorded has a negative test apparently been at fault, Bastedo having had two patients in

[1] A paper read before the Clinical Section of the Royal Society of Medicine on March 14th, 1913.
[2] W. A. Bastedo: American Journal of Medical Science, cxlii., 11, 1911.
[3] F. Rost: Münchener Medizinische Wochenschrift, cix., 2055, 1912.
[4] L. Dreyer: Ibid., cix., 1845, 1912.
[5] Slawinski: Ibid., cix., 2065, 1912.

whom typical attacks of appendicitis occurred within six months of his test having been tried with a negative result.

I have only employed the test in cases of suspected chronic appendicitis and in patients who have recently recovered from a doubtful attack of acute appendicitis. Mr. Eric W. Sheaf, of Guildford, tells me, however, that in two cases of acute appendicitis, in which he was in doubt as to the diagnosis, he employed the test and found that the introduction of a very small quantity of air at once increased the pain. He would, of course, not have done this had he not been prepared to operate at once, and in both cases he operated within a few minutes and removed an acutely inflamed appendix. Inflation in such cases is naturally contraindicated unless it is possible to operate at once, if the test proves positive, and great care must also be taken to introduce only just sufficient air to produce a slight increase in the pain, as otherwise there would be a danger of tearing adhesions or causing a diseased appendix to perforate.

In my Goulstonian lectures I showed that the only stimulus to visceral pain is distension. On inflating the colon the pain eventually produced occurs no sooner in the appendix than in the rest of the colon, so long as the former is not diseased, but if it is inflamed, pain is much more rapidly produced, and consequently local pain and tenderness are observed in the right iliac fossa. It is not yet clear to what extent adhesions binding down the appendix may be concerned in the production of the pain, but in some of my cases there were no adhesions, and consequently it is clear that this cannot be the sole factor.

Weymouth-street, W.

CASES TREATED BY RADIUM IN THE ROYAL INFIRMARY, EDINBURGH, DURING 1912.[1]

BY DAWSON F. D. TURNER, M.D. EDIN., F.R.C.P. EDIN., F.R.S.E.,

IN CHARGE OF RADIUM TREATMENT AT EDINBURGH ROYAL INFIRMARY.

FORTY-ONE patients have attended for radium treatment during the past year. Twelve of these suffered from malignant disease, 11 from rodent ulcers, 11 from nævi, 1 from leukoplakia, 1 from lymphadenoma, 1 from spring catarrh, 1 from tubercular glands, 1 from a tubercular ulcer of the dorsum of the hand, 1 from a papilloma, and 1 from hypertrichosis. Many of these patients received prolonged treatment or attended a considerable number of times; thus in some of the malignant cases, whenever indeed it was possible, a tube of radium was inserted into the growth and maintained there for periods up to 12 days, while at the same time external treatment was employed so as to subject the growth to a cross fire of rays. The treatment of port-wine stains must also be a very prolonged one, as a cosmetic effect is desired; very small doses have to be given and the result carefully observed lest an atrophic condition of the skin be produced. Radium treatment as a rule is conducted in the following manner. A dose large enough in the experience of the expert to produce the desired effect is administered, and the patient is sent away and told to report himself in two or three weeks, for the full effect of any dose is not manifested for three or more weeks. Another dose, if necessary, is then given, and the patient is again sent away for a fortnight. I have not time at this meeting to refer to the question of dosage or of screens.

The cases which have been most benefited during the year have been the nævi and rodent ulcers. Of 11 nævi, of which 2 were port-wine stains, 7 were cured, 3 are under treatment, and 1 (port-wine stain) did not return. Rodent ulcers, if not affecting mucous membranes, cartilage, or bone, are also extraordinarily amenable to radium. The reason why radium is so superior to carbonic snow, or zinc ionisation, or excision, is respectively because the rays penetrate deeply, in fact right through the body (the gamma rays will penetrate 10 inches of lead), so that the very roots of the rodent ulcers are attacked; secondly, the treatment is absolutely painless; thirdly, the cosmetic result leaves nothing to be desired.

[1] A paper read before the Edinburgh Medico-Chirurgical Society on March 5th, 1913. The communication was illustrated by lantern slides.

Rodent ulcer.—Of 11 cases 6 were cured, 1 is under treatment, 3 did not return, and 1 was unsuitable for radium treatment. Of the cases that were cured, in 1 the ulcer affected the upper lip, and was on the point of penetrating it. In 3 cases the ulcers were in the furrow between the nose and cheek; they had received unavailingly prolonged treatment with X rays. In one case the ulcer was on the ala nasi (a case under the care of Professor F. M. Caird); it measured three-quarters of an inch by half an inch, and was on the point of penetrating. In this case one dose of 65 milligramme hours sufficed to cause complete healing with a beautiful cosmetic result and no contraction. The disease has, however, recurred a little distance off on the tip of the nose. An application of radium has accordingly been made to it, and I have no doubt of a successful issue. In another case under the care of Professor Caird the patient was a male aged 61 years. The disease began many years ago as a pimple on the right side of the nose. Eight years ago this was removed. On its return, but now affecting the internal canthus, Professor Caird operated twice, in 1909 and 1912. On the latter occasion, recognising that he had not removed all the growth, he recommended the patient to me for radium treatment. I placed two tubes of radium into the cavity, which was nearly two inches deep, and kept them there for 30 hours; no screen but a thin tube of aluminium was employed. This was on May 4th, 1912. In July the cavity had almost filled up, but for precaution sake I administered a dose of 47 milligrammes of radium for 30 minutes. In December, 1912, when the patient called upon me, he was quite cured.

Two of the cases of rodent ulcer were treated by the insufflation of the radiothorium emanation. One of the patients was a male, aged 49 years (recommended by Professor Caird), who six years previously had had enucleation of the left eye performed by Dr. G. Mackay. The disease had recurred and now was in the form of a sloughy ulcer about the size of a half-crown piece below the left orbital cavity and leading to extensive excavations beneath the cheek. As the disease was too extensive and too difficult of access for the limited amount of radium at my disposal, the idea occurred to me to treat it by blowing into it the radiothorium emanation, which would be carried into the remotest corners of the excavations and would coat the walls with a highly radioactive deposit. I did this some 20 times in the course of a few hours and the immediate effect seemed to be to diminish the fœtor; unfortunately, the patient did not return for further treatment. The second case treated by the radiothorium emanation was that of a male, aged 60, recommended by Mr. David Wallace. The duration of the disease was 15 years; the patient had been treated by X rays and had had enucleation of the left eye performed by Mr. Wallace three years ago. A later operation had also been performed by Mr. Wallace. At the time the radium treatment was begun there was an ulcer with everted edges occupying the left superior border of the nose and extending deeply into the orbital cavity. As the man was an in-patient I instructed the nurse to insufflate the cavity with the emanation every half hour during the day for one minute at a time. This was done for ten days, when it was thought advisable to supplement the emanation by the application of solid radium. After four days of the combined treatment the patient was sent home. He had had 176 insufflations of the emanation and 235 milligramme hours application of solid radium. A fortnight later he returned very much improved; the nasal ulcer was practically healed. When another fortnight had elapsed he was readmitted and was treated again by the combined method for three days. On his reporting himself a month later (Jan. 8th, 1913) there was further improvement. The total dose was 208 insufflations of the radiothorium emanation and 675 milligramme hours of solid radium. He has not reported himself since.

Malignant disease.—Twelve cases were attended to in the department during the year. With one exception they were all inoperable cases; with two exceptions they were either recurrences or secondary deposits. Of these 12 cases 1 was healed with a sound scar, after the disease had reappeared in the neighbourhood, 3 were improved, 1 exhibited temporary improvement, 1 (a carcinoma of the pharynx) was unrelieved and died; of the remaining 6, 2 are still under treatment, 1 did not return for treatment, 1 refused treatment, in 1 a prophylactic dose of radium was given after an operation for removal of a sarcomatous growth

in the groin, and in 1 the growth was so extensive as to render a resort to treatment with a limited amount of radium hopeless. With the exception of the sarcoma referred to above all the cases were of a carcinomatous nature, and in 5 of them the upper or lower jaws were the seat of the disease. Brief details of the cases are as follows:—

CASE 1.—A female, aged 49, with a recurrent epithelioma of the right ala nasi, recommended by Mr. Wallace. The patient had long suffered from an ulcer on the ala nasi; prolonged treatment with X rays and weak radium preparations was followed by excision. When admitted on June 25th, 1912, there was an ulcerating crack on the external surface of the right ala nasi. A single dose of 95 milligramme hours of radium bromide screened by glass and aluminium was administered. On July 9th there was a good reaction. The scab did not come away until the middle of September, when the ulcer was found to be completely healed over. On Jan. 28th, 1913, the scar was still in a perfectly sound condition, but a small ulcer had appeared just within the nostril on the septum nasi. A dose of 40 milligramme hours of radium bromide was administered, screened as before by glass and thin aluminium, with a successful result.

CASE 2.—A female, aged 70, recommended by Dr. W. G. Sym. Epithelioma of one year's duration affecting the upper lid and canthi of the left eye. Had 24 full doses of X rays. On admission there was an irregular ulcer eating away the lower margin of the upper lid and involving the canthi; the body of the lid was hard and swollen. Treatment commenced on Jan. 20th, 1912, and continued at intervals to the following May. Great improvement followed. The ulcer healed and the swelling disappeared. On May 22nd Dr. Sym examined the patient and wrote: "There is very great improvement, very great indeed, but whether the cancer is all gone or not I can't be sure." On June 20th the patient returned with a hard lump external to the external canthus; this was given one good dose of radium and the patient was sent home. On Oct. 29th she returned much worse with the bone affected. Mr. J. W. B. Hodsdon excised the growth by an operation which opened into the frontal sinus. A prophylactic dose of 210 milligramme hours of radium was then administered.

CASE 3.—A male, aged 44, recommended by Professor Caird. A rapidly growing recurrent epithelioma of the right upper jaw, operated on twice within five months by Professor Caird. There was a large ulcer extending backwards on the mucous membrane of the buccal cavity on the right side; the skin outside was red and angry looking. On Nov. 7th, 1911, external and internal applications of radium were commenced; the external applications were shielded by a sheet of silver half a millimetre in thickness, the internal by a thin sheet of aluminium. On Dec. 4th the patient was sent home after a total dose of 1011 milligramme hours. The disease had ceased to extend and considerable improvement was manifest. On Jan. 9th, 1912, he returned in a worse condition; there was a large external swelling, and Professor Caird thought that further treatment would be useless.

CASE 4.—A female, aged 42, recommended by Mr. Hodsdon. An epithelioma following lupus, duration 30 years; it had had courses of X rays extending over years. The disease had been treated by both medical and surgical means, it had been scraped, cauterised, and partially excised. Below the left nostril there was an irregular ulcer eating into the lip; it was two inches broad by one inch long, and it had raised margins except where it was spreading on to the mucous membrane of the lip; there was a perforation below the left nostril. Treatment was begun on Nov. 28th, 1912. 25 milligrammes of radium bromide (international standard), screened only by glass and aluminium, were applied to successive areas of the ulcer for a few hours daily during a week; the dose amounted to 1620 milligramme hours. This was followed in three weeks' time by a strong reaction, and afterwards considerable improvement was manifest; healing was going on above, granulation tissue was present, and malignant characters were absent. The patient is to return for more treatment.

CASE 5.—A male, aged 72, recommended by Dr. W. Elder. Malignant disease of the fauces and pharynx. Duration more than a year; difficulty in swallowing and speaking. An irregular swelling could be observed, involving the soft palate and uvula and causing great deformity. Left cervical glands enlarged. Both Professor Alexis Thomson and Professor Caird considered the case quite inoperable. With the hope of relieving the symptoms radium treatment was commenced on Sept. 19th, 1912. A capsule containing 40 milligrammes of radium bromide was attached to an aluminium rod and held by the patient against the affected part for one hour two or three times a week; only an aluminium screen was used. By Nov. 28th the patient had received a dose of 388 milligramme hours. The applications appeared to relieve his pressing symptoms, but he gradually sank, and died on Dec. 14th.

CASE 6.—A male, aged 35, recommended by Professor A. Thomson. Diagnosis: Round-celled sarcoma situated in the groin. Duration 12 months. Was admitted to the Royal Infirmary on Jan. 11th, 1913, complaining of a lump of the size of one and a half fists in the groin, and of increasing weakness; the left leg was œdematous. On the 17th Professor Thomson removed the growth, which proved to be a round-celled sarcoma. On the 30th a tube of glass in an aluminium cover containing 10 milligrammes (international standard) of radium bromide was inserted into the wound and kept there for 24 hours. This was intended to act as a prophylactic measure.

CASE 7.—A female, aged 54, recommended by Mr. Alexander Miles. In September, 1911, the patient had been admitted to Chalmers' Hospital, complaining of a hard painful lump in the left axilla. Mr. H. J. Stiles removed the mass and the breast; both were found to be the seat of a medullary carcinoma. The patient was readmitted on May 28th, 1912, with a rapidly growing recurrence in the scar; this was excised on the 31st. She returned at the beginning of 1913, with a secondary growth affecting the sternum. The case was recommended to the Edinburgh Royal Infirmary, where the patient was admitted under the care of Mr. Miles. Projecting from the sternum was a hemispherical growth, in area about the size of a teacup saucer, and raised nearly an inch above the general surface. The skin over it was reddened. The patient complained of spasms of severe lancinating pain. Two tubes of radium, each containing five milligrammes (international standard), were introduced by Mr. Miles into the growth, screened only by glass and aluminium, and were kept in for seven and 12 days respectively, being moved occasionally so as to expose a fresh area to the radiation. At the same time applications of 25 milligrammes (international standard) screened by silver were made externally. The total internal dose was 2400 milligramme hours; the total external dose 800 milligramme hours. Under this treatment the tumour rapidly flattened down, and in six weeks' time had disappeared. Some pus was discharged from the incisions, and a good deal of reaction was manifest on the skin. The lancinating pain subsided shortly after the applications. The patient expressed herself as very grateful. She is still under observation.

Of the remaining 5 cases (Cases 8 to 12) 2 did not return for treatment, 2 are still under treatment, and in 1 treatment was refused on account of the extensive nature of the growth.

Leukoplakia.—A male, aged 52, recommended by Professor Thomson, has attended since October, 1911, for radium treatment. He had a specific history. The duration of the disease was one year. On the surface and side of the left half of the tongue there were several whitish hard patches somewhat raised above the surface. 10 milligrammes of radium bromide (international standard) were enclosed in an aluminium box and applied for an hour at a time twice a week to the patches. The effect of the treatment is to improve and check the development of the disease, because if it be intermitted, as in the holidays, the condition rapidly becomes worse. The patient refused operation, and he has had prolonged courses of internal treatment, also an injection of salvarsan. Stronger and more prolonged doses of radium would, I think, produce more decided benefit.

Lymphadenoma.—A male, aged 18, was recommended by Dr. Byrom Bramwell for radium treatment in Novembery 1911. There were growths round the neck and in the groin and axilla. The circumference of the neck measured 17½ inches. The neck was treated by external applications screened by silver. No improvement resulted, and after a total dose of 1983 milligramme hours, given in one week, treatment was suspended.

Spring catarrh.—A male, aged 9 years, recommended by Dr. Mackay. This was an old case. The patient's right eye had already been cured by the use of radium, but the left eye had not had sufficient treatment. He was given a dose of 5 milligramme hours by the application of a 10 milligramme capsule to the eyelid for half an hour. This patient had first attended in March, 1910. Both upper lids were covered on their internal surface with the typical granulations and pavement like blocks. The lids were much swollen. The right lid only was first treated, and in three months' time was practically well after a dose of 32·5 milligramme hours. Treatment of the left eye was then begun.

Tubercular glands.—Only one patient recommended by Dr. J. Burnet, suffering from enlarged cervical glands, attended the department, and he did not return.

Tubercular ulcer.—A boy, aged 3½ years, recommended by Dr. R. Railston Richardson, attended for radium treatment of tubercular ulcer on the dorsum of the right hand. Duration two years. Had been treated with iodine, caustics, &c. There were two patches close together, measuring nearly half an inch in diameter, dark-red and slightly elevated. Treatment was begun on Dec. 3rd, 1912, and was continued for a fortnight, by which time the dose amounted to 20 milligramme hours. Only a screen of aluminium was employed. In a month's time the patches were covered by a good scab, which fell off at the end of January, 1913. The patches had almost disappeared, but to aid in the cure a further dose of 13 milligramme hours has been administered. The patient is still under observation.

Papilloma.—A female, aged 51, recommended by Dr. Samuel Davidson, of Kelso, was admitted on Oct. 8th, 1912, with a papilloma on the left side of the nose. It was half an inch wide and a quarter of an inch raised above the surface, and it was made principally of a horny material. Duration about five years, but latterly growing more rapidly. The patient had had a previous growth removed some years ago from a position a little higher up. A dose of 35 milligramme hours screened by aluminium was administered by a single application. In a fortnight's time the growth fell off; in seven weeks' time there was perfect healing, the site of the growth being covered by a beautiful supple skin.

Hypertrichosis.—A female, aged 25, recommended by Dr. Fleming. The patient attended for a week during September, 1912, for the radium treatment of this condition. The patient had a thick hairy growth round the lower border of the chin. After she had been made aware of the difficulties of the method of treatment, applications screened by aluminium of 5 milligramme hours were made over successive areas. These proved to be insufficient to produce epilation. The patient proposes to return later.

Edinburgh.

HYPEREXTENSION AND "BACK-FIRE" INJURIES OF THE WRIST.[1]

BY CUTHBERT S. WALLACE, M.B. LOND., F.R.C.S. ENG.,
SURGEON TO ST. THOMAS'S HOSPITAL, IN CHARGE OF OUT-PATIENTS.

UNTIL the last few years very little was heard of carpal injuries, either in the nature of fractures or dislocations. When injuries about the wrist began to be more accurately studied by means of the X rays, fractures and dislocations of the carpal bones assumed a more important place in surgery. There is no doubt that in the past loss of function following an injury to the wrist was put down to a sprain or to a fracture of the Colles type, when it was really due to some trauma of the carpal bones. The motor-car, as being responsible for the so-called "back-fire" injuries, has also helped to arouse interest in this direction. These latter injuries are not confined to the carpus, but include fractures of the radius; indeed, one fracture of this bone seems to be peculiarly connected with this accident. Hyperextension of the wrist is apparently a factor in their production, and two cases are included among those given in the present communication.

The first case was that of a man whose wrist was forced backwards as the result of a fall. There was very great pain experienced in the hand and wrist, much more than could be accounted for from a casual examination of the hand. The pain was mostly felt in the two middle fingers, which were kept semiflexed and immobile, and any attempt to straighten them caused a very great increase in the pain. Palpation over the anterior surface of the wrist showed that under the palmaris longus tendon and just below the upper bracelet fold there was a resistance which was not present on the other side. Viewed laterally the wrist appeared fuller than on the other side. On account of the fixed and flexed condition of the middle fingers and of the abnormal resistance on the front of the wrist a dislocation of the semilunar bone was diagnosed. A skiagram showed that this was the case, and also revealed a fracture of the scaphoid through its neck and an almost vertical fracture of the radius, taking off the styloid process of that bone. A vertical incision to the inner side of the palmaris longus tendon showed the semilunar bone to have been completely dislocated from its proper place and to lie on the front of the wrist-joint. The semilunar facet still looked downwards. The cause of the pain and the fixation of the fingers was at once obvious. The dislocated bone had pushed forward the middle flexor tendons so that they made two right angle turns as they passed down to lie beneath the anterior angular ligament. The semilunar bone was removed together with the proximal end of the scaphoid, which lay loose in the joint. A useful hand has resulted.

The second case was one in which the nature of the violence was remarkably clear. The patient was engaged in loading cases on to a truck by means of a swinging crane. In trying to steady a heavy package as it swung round, the forearm was pushed backwards until the elbow came in contact with the wall, when the further movement of the package forced back the patient's hand until the dorsal surfaces of the hand and forearm were almost in contact. When examined there was a prominence on the back of the hand, and in addition the whole member was carried backwards. Under an anæsthetic the deformity partially disappeared. The hand, however, remained useless, and there was constant severe pain of an aching character. A stereoscopic X ray picture showed an unusual injury. The os magnum, the unciform, and the os pyramidale were displaced backwards as regards their upper articulations, so that the head of the os magnum only just touched the proper facet on the scaphoid. The injury might be described as a dislocation backward of the second on the first row of carpal bones, with the exception that the relations of the scaphoid with the trapezium and the trapezoid were undisturbed. In addition to this there was a backward dislocation of the semilunar bone, so that it was completely removed from its proper place and rotated so that its radial articulation looked backward. It was evident that this bone in its abnormal position prevented the reduction of the other bones. It was decided to excise it. An incision was made on the back of the hand and the bone exposed. An attempt was made to lever it out preparatory to dividing the remaining ligaments, but in so doing the raspatory slipped, and when an attempt was made to again introduce it, it was found that the semilunar as well as the other carpal bones had slipped back into place. A perfect hand resulted.

In a third case the patient was standing on a ladder when the foot of it slipped away from the wall against which it leant. The man was thrown forwards, so that his hand came in violent contact with the wall and was forcibly bent backward. Some ten days later the patient presented himself at the hospital, complaining that his hand was very painful and useless. The appearance of the hand suggested a Colles fracture without much displacement. An examination showed that there was a prominence on the anterior surface of the wrist just below the upper bracelet, that the two middle fingers of the hand were almost fixed, and that the grasp was practically absent. An X ray examination showed that the semilunar bone and os pyramidale were displaced forwards and upwards. The semilunar bone, which was lying on its side, was excised. A fairly useful hand has resulted, but recovery was slow, due perhaps to the time that elapsed between the injury and the operation.

From the foregoing cases it appears that two injuries, among others, are likely to result from a forcible bending back of the hand—namely, a fracture of the scaphoid and a dislocation of the semilunar bone. It will be convenient to study the causation, diagnosis, and treatment of each separately.

Fracture of the Scaphoid.

The fracture of this bone sometimes runs through the neck—that is, between the articulations for the radius and the trapezium on the outer side and into the articulation for the os magnum on the inner side. In many cases the fracture passes more internally through the bone, dividing it into a large distal and a small proximal fragment. There is some doubt as to the actual method by which this bone is broken. There seem to be three possibilities. It may be fractured (1) by a force applied to its two extremities (extension, flexion, abduction); (2) by a compressive force (between the object struck and the radius); or (3) by direct violence (such as a kick).

1. A study of many cases of fractured scaphoid shows that the injury may be associated with acute extension, flexion, and abduction of the wrist without any direct violence. If a skiagram of the wrist is studied it is easy to see how the three movements mentioned may produce an indirect violence fracture. In the first place, it is necessary to remember that flexion and extension of the hand take place both at the wrist and mid-carpal joints. In the wrist the joint line passes across in a fairly direct line and appears on both sides of the joint. It follows that in extension no bone is subjected to any breaking strain. In the mid-carpal joint the state of affairs is different. The joint line here is transverse to the axis of the limb until the outer side of the os magnum is reached, where it is blocked by the scaphoid, through the middle of which it would pass if continued outwards. The scaphoid can be regarded as belonging to both the distal and proximal row of carpal bones. When the wrist is therefore either acutely flexed or extended, and the second row of carpal bones makes an angle with the first, the scaphoid, trying to accommodate itself to the position of both rows, will be subjected to a strain tending to break it in the line of the mid-carpal joint. It will be fractured by indirect violence much in the same way that a stick is broken by a force applied to its two ends. That the scaphoid is broken in the way suggested is supported by a fracture dislocation of the carpus which is sometimes met with. Here the scaphoid is fractured in the usual position, the proximal half remaining with the first row of carpal bones, while the distal is displaced backward with the second row. In violent abduction of the hand it seems probable that the scaphoid is fractured by being bent across the styloid process of the radius, which process is itself not uncommonly broken off as well.

2. By a compressive force. In falls on the outstretched hand, to the extension of the wrist is added another factor—namely, a blow on the thenar eminences. In such cases the two rows of carpal bones are compressed between the object struck with the hand and the articular surface of the radius,

[1] A paper founded on a Clinical Lecture delivered at the Medical School, St. Thomas's Hospital.

supported by the weight of the body. The head of the os magnum will be driven against the semilunar and the inner part of the scaphoid If the hand is in the same axis as the forearm the radius will receive the transmitted blow in its long axis, while if the hand is ulnar-flexed the blow will pass in the direction of the styloid process, which may in this way be driven off. In either case the scaphoid and semilunar will be compressed and liable to suffer fracture, though the latter bone is but very rarely broken.

3. By direct violence. The scaphoid in extension of the wrist becomes prominent on the anterior surface, and may be broken by actual contact with the ground. The same result is met with as the result of a direct kick without contact with the ground or extension of the wrist.

Complications.—Fracture of the styloid has already been mentioned. Dislocation of the semilunar, as seen in Case 2, is not uncommon, and three cases of injury to the median nerve have lately been reported, produced by the same hyperextension that broke the bone.[2] Fracture of the semilunar has also been met with, but is very rare.

Diagnosis.—After the receipt of an appropriate injury this is, as a rule, easy, though it will require confirmation by X ray examination. There is weakness of the wrist, most marked in the extended position, so that leaning against a wall with the outstretched hand or pushing a door to is difficult and painful. The pain is felt in the anatomical snuff-box and over the site of the bone both on the front and back of the wrist. There is also tenderness in the same situations. There may be a prominence on the back of the joint due to a displacement of one, usually the proximal, fragment. There may or may not be swelling due to injury of the soft parts.

Prognosis.—It is very rare, even after many years, to find union of the fragments. It is unknown whether this is due to want of fixation, to want of nourishment, or to the fact that the broken surfaces are bathed in the synovial fluid of the joint. The fact remains that after the lapse of a considerable period the fracture looks as fresh as on the day it happened. A certain number of persons suffer no inconvenience, but by far the greater number complain of a more or less weakened wrist. It has been suggested that this disability is due to a dislocation of the fragments (the proximal one going backwards), but experience shows that a weak wrist will remain even if the broken surfaces are in good apposition. It may be that the ununited fracture produces a traumatic arthritis. In this connexion it is to be remembered that the proximal fragment may be free from all ligamentous control and form a loose body in the joint.

Treatment.—If a displaced fragment can be felt an attempt should be made to reduce it by pressure combined with flexion and extension of the hand. As the greatest weakness is felt in the extended position, it has been recommended that the hand should be put up in the extended position and kept there for some ten days before movement and massage are begun. As all experience goes to show that union is not to be expected, it is advisable to excise the loose fragment within a reasonably short time if any weakness persists, even if no dislocation of the fragments exists. Excision can be performed either by a vertical incision on the front of the wrist to the outer side of the flexor carpi radialis or by one on the back of the joint between the long extensors of the fingers and those of the wrist. A good and useful hand may be promised.

Dislocation of the Semilunar Bone.

This injury is caused by the same indirect violence associated with fracture of the scaphoid; indeed, the two are often found together. The bone nearly always goes forward; the case narrated above where it escaped behind is very rare. Even the anterior dislocation is not nearly so common as fracture of the scaphoid. The mechanism of the production of the dislocation is apparently as follows. Hyperextension of the wrist causes the posterior horn of the bone to rotate forward until the posterior ligaments are so put on the stretch that they rupture and allow the bone to be squeezed out of its socket. The dislocation may be complete or incomplete. In the latter instance the radial articular facet still remains for some of its extent in contact with the radius. The semilunar facet looks backwards and downwards, while the head of the os magnum lies behind the posterior horn of the dislocated bone. In the complete variety the bone leaves the wrist-joint and lies on the front of the joint. In some cases the semilunar facet still looks downwards, but in others the pressure of the surrounding flexor tendons causes the bone to rotate, so that it lies on its side and the semilunar facet looks towards the radius or ulna. Its only attachment is a few strands of the anterior ligament of the wrist.

Diagnosis.—As a rule this is not difficult. When viewed sideways the hand may have somewhat the appearance of the silver fork deformity associated with a Colles fracture. The fingers are bent, especially the two middle ones. If the dislocation is complete there will be in all probability a prominence on the anterior surface of the wrist below the upper bracelet line. Even if there is no prominence here palpation will usually reveal an abnormal resistance. On the back of the hand the head of the os magnum may be visible, and above it an unusual hollow due to escape of the lunar bone. Any attempt to move the two middle fingers either actively or passively is accompanied with great pain. In addition, there is a severe aching pain in the wrist which seems out of all proportion to the amount of visible injury. This pain seems to be very characteristic of the accident. The grasp is lost and the hand quite useless.

Treatment.—The bone must be replaced or excised. If allowed to remain in its abnormal position a perfectly useless hand will result. Reduction may be attempted, it is stated, first by pressure on the bone in the extended position of the wrist whereby the radial articular facet is brought into contact with the radius, and the head of the os magnum is caused to lie just by the posterior horn of the lunar bone. The pressure on this bone is then continued while the hand is flexed, by which movement the head of the os magnum passes into its right articulation. This method is only likely to be successful when the dislocation is not complete. If the bone has completely escaped from the wrist, even if the semilunar facet still looks downwards, manipulation is not likely to reduce it. When the bone has rotated on to its side excision is the only treatment. This is best performed by an incision to the inner side of the palmaris longus tendon. When the bone is reached the reason of the pain and limitation of movement is at once seen. The bone, completely displaced from the wrist, pushes forward the flexor tendons so that to pass beneath the annular ligament they must make two right angle turns, being thereby put very much on the stretch. Directly the bone is removed the tendons fall back into their proper place. Removal is easy, as only a few strands of fibrous tissue need division. A perfectly normal wrist may be expected.

The Injuries caused by "Back-fire."

The next two cases were caused by a "back fire" in starting a motor car.

CASE 4.—The car was a powerful one and the accident occurred while the handle was being depressed. The radius was fractured three inches above the lower extremity. The upper end of the lower fragment was displaced forwards. It might be thought that this fracture was caused by direct violence from the rapidly revolving handle, and it is true that such an injury may happen under like circumstances. In this particular instance this assumption is negatived by two facts. In the first place the patient is certain that when the starting handle came to rest he still retained his hold upon it, and in the second place, from the absence of bruising and infiltration of the tissues, as shown at the operation to reduce the fracture.

CASE 5.—This case, like the last, was caused by a "back-fire." The fracture was at the extreme lower extremity of the radius. Starting about three-fourths of an inch above the tip of the styloid process, it passed inwards and downwards, to enter the wrist-joint just external to the radio-ulnar articulation. There was no displacement, the fracture being of the fissure type. The patient complained of pain and of inability to use the hand, but inspection did not show any further sign of injury.

As was noticed in speaking of the first three cases, falls on the outstretched hand give rise to two kinds of violence as far as the wrist-joint is concerned—an indirect one due to hyperextension or abduction of the hand, and a direct one due to compression of the carpal bones between the ground and the lower end of the radius. It has also been pointed out that lateral flexion of the hand may have some influence on the nature of the injury. In some cases the lesions described above result and in others a Colles fracture.

[2] W. A. Campbell: THE LANCET, Nov. 9th, 1912, p. 1296.

When a "back-fire" occurs in starting a motor precisely the same violence is experienced, and similar injuries are to be expected. The hand in position of extension with the palm facing downwards grasps the starting handle. The body is inclined forwards, and if the shoulder is above the hand so as to utilise the weight of the body, the hand is, as it were, wedged between the starting handle and the shoulder. When the starting handle is forced backwards and upwards in the reverse direction to the pressure applied, the hand, which from its position is unable to escape quickly, is carried into a position of extreme extension. At the same time the thenar eminences receive a severe blow, which is transmitted through the carpal bones to the radius. If the hand is in a position of ulnar flexion at the time of the premature explosion, the compressive violence will be directed somewhat against the styloid process.

At other times the hand, by the upward movement of the starting handle, will be carried into a position of radial abduction as well as of hyperextension. This is likely to happen when the hand is not under the shoulder but stretched out in front of the body. Three kinds of violence are therefore met with: (1) hyperextension, (2) hyperabduction, and (3) compression of the carpus. It has been pointed out that the fracture in Case 4 must have been caused by indirect violence—that is to say, by a hyperextension of the wrist—and the displacement of the upper end of the lower fragment in a forward direction supports this view.

The injury received in Case 5 is one found very frequently associated with a "back-fire," and has in consequence been named "chauffeur's fracture." The direction of this fracture varies within somewhat wide limits. At one extreme it is a transverse fracture, and might well be described as a Colles fracture without displacement. At the other extreme the fracture approaches the vertical and becomes a fracture of the styloid process. The case here quoted lies between the two extremes, as the fracture line entered the wrist-joint just external to the radio-ulnar articulation.

It seems likely that the difference in the direction of the fracture is due to the angle that the axis of the hand makes with the axis of the forearm at the time of the receipt of the injury. If the axes correspond the hand will be subjected to a pure hyperextension, and a transverse fracture will result. If the hand is ulnar-flexed the carpus will be driven against the radial articular surface, tending to break off the styloid process, so that a more vertical fracture will result. A similar effect will be produced if the hand is carried round into the position of forced abduction.

As has been explained, the violence in a "back-fire" is similar to that met with in the first three cases described. It is not surprising that similar lesions should result, and as a matter of fact the list of injuries commonly associated with "back-fires" are found to include fractures of the scaphoid and dislocation of the semilunar, as well as the above described fractures of the radius.

Upper Wimpole-street, W.

IONIC MEDICATION IN HERPES ZOSTER.

BY ANGUS MACNAB, M.B., CH.B. EDIN., F.R.C.S. ENG.,

OPHTHALMIC SURGEON, KING EDWARD VII. HOSPITAL; CHIEF CLINICAL ASSISTANT, ROYAL LONDON OPHTHALMIC HOSPITAL, ETC.

HERPES zoster when occurring on the trunk or limbs not only presents the practitioner with a problem in etiology of great difficulty, but leaves him with a sense of the inadequacy of the ordinary therapeutic measures which are at his command. When the affection is distributed in the region of the trigeminal nerve and takes the form generally known as herpes zoster ophthalmicus, to this difficulty is added the very considerable risk of a most persistent and intractable iritis, pustulation of the cornea, and an extremely discomforting photophobia. Such cases often last for a considerable time, and the patient may suffer permanent damage to the vision.

Several such cases having recently been under my care, I have been tempted to try the effect of ionic medication, and have been greatly pleased with the results. The drug used has been sulphate of quinine, applied by means of the positive current over the whole area affected, for 15–30 minutes, with a current of 1–1·5 milliampères per square inch of surface. In general two applications at an interval of from 7 to 10 days were made to the skin area, and the conjunctiva was treated separately for a shorter time and with less current. The results have been that the neuralgic pains and the disturbed sensibility of the part have cleared up almost at once. The iritis disappeared and the sensation of the cornea and conjunctiva returned. As there is in every case some destruction of tissue, a complete return to the normal cannot be expected, but so far as such appeared possible this form of treatment seems to provide a cure for this distressing affection.

From the ophthalmic point of view herpes zoster can be divided into two classes: (*a*) those in which there is no affection of the cornea and iris, and (*b*) those in which there is iritis, and generally an affection of the cornea. I will give in brief the records of one case of each variety, dealing first with a case where the iris was unaffected.

CASE 1.—The patient had been suffering from a pain in the shoulder for some four weeks, during which time he had been much overworked, his professional engagements causing him considerable eyestrain; he did not use glasses, though he was somewhat presbyopic and had a slight astigmatism. Nineteen days before I saw him he felt a pricking sensation at the roots of the hair and over the forehead; this was followed by an eruption like a nettle rash, and two days later the area affected began to suppurate; the suppuration lasted for about a week, when the scabs began to separate. There was considerable photophobia of the left eye and severe neuralgic pains in the forehead.

On examination the whole of the forehead, the side of the nose, and the upper lip on the left side were covered with the remains of the eruption; the skin was red, there were many scars, and some pustules still remained. In the affected area there were patches of anæsthesia, most marked where the destruction of the skin had been most extensive, and separated from each other by bands where the sensation appeared normal; the anæsthesia was more profound on the forehead than on the nose. The whole area was very irritable, and the slightest draught of cold air on the affected part was extremely painful, so much so that the patient had the area covered up with wool and a bandage. The whole of the conjunctiva was congested, and there were two large pustules near the caruncle; there was well-marked anæsthesia of the conjunctiva. The surface of the cornea was clear; well-marked loss of sensation occurred in its upper part. There was no loss of transparency in its substance. There were no signs of any involvement of the iris.

As to treatment, an electrode of about 15 square inches was prepared, and was applied to the affected area over three thicknesses of lint soaked in the solution of sulphate of quinine. A current of 15–20 milliampères was passed through the electrode for 20 minutes. During the treatment there was a considerable amount of pain, though not sufficient to distress the patient. The whole area was then covered with cotton-wool and a bandage. Three days later the skin condition was greatly improved. The sensibility of the skin of the cheek and nose was normal, and the anæsthesia of the forehead had improved by a reduction in size of the patches, with a similar diminution in the degree of the sensory affection. There was a slight improvement in the condition of the conjunctiva and the cornea. On the following day an electrode was prepared to fit the conjunctiva, and after instilling cocaine this was applied for four minutes; the forehead was again treated for 15 minutes. On the following day there was a rather severe reaction of the conjunctiva, the lids being swollen, with a considerable mucopurulent discharge and an increase of the photophobia. This rapidly passed off, and a week later there was only some disturbance of sensation. In the whole area affected there was no definite anæsthesia even to light touch; the sensation in the cornea was normal, but in the conjunctiva at the site of the pustules near the caruncle there was a small area which was anæsthetic. The patient expressed himself as quite comfortable, but thought that the affected eye had greatly deteriorated in vision. On further examination into this point the eye was found to be astigmatic 1·50 D., and with the correction 6/5 was read easily. He took up his duties, and beyond a slight tendency to watering in the eye affected appeared to be perfectly recovered.

This case will well illustrate the effects of treatment in the comparatively recent stage of the affection where the iris has not been affected, and I will record a case of the other variety which also shows that the benefits of this treatment can be obtained at a later stage of the affection.

CASE 2.—The patient was sent in from the country, and the following history was supplied by her physician. The attack began with pain and puffiness of the skin immediately in front of the ear (right side); the swelling was so marked that a suspicion of mumps was aroused. Four days later an eruption of vesicles appeared on the forehead, and the original swelling disappeared either with the appearance of the eruption or immediately thereafter. The vesicles suppurated; there was intense neuralgic pain over the fore-head and eye. A few days later the pupils were observed to be of unequal size, but no special pericorneal injection was noted, the whole conjunctiva being congested and the examination difficult on account of the photophobia.

I saw the patient 14 weeks after the onset of the attack, when she was still suffering considerable pain of a neuralgic character, and the photophobia was so troublesome that the eye was kept under a bandage, and indeed an examination of the cornea and conjunctiva was only carried out with difficulty. Pitted scars extended all over the forehead and down outside the eye to the level of the pupil; I was unable to detect any scars on the nose or cheek. Over the whole of the affected area there was a pronounced anæsthesia, with patches of hyperalgesia. On the cornea were some four or five spots, the remains of vesicles which apparently from the density of the nebulæ had pustulated; they lay in the pupillary area and the lower part of the cornea. Inwards and also downwards from the cornea the conjunctiva was thickened and congested. The whole of the lower part of the cornea and conjunctiva was anæsthetic, but the sensation appeared normal in the upper part. The pupil was semi-dilated and reacted very badly to light. There was a considerable amount of precipitate, both pigmented and non-pigmented, on the back of the cornea, and some exudate on the surface of the iris and the anterior capsule of the lens. Dilated vessels were visible in the iris.

An electrode of about 6 square inches was prepared, and a current of 4 milliampères was passed through a solution of quinine for 20 minutes; there was a considerable amount of pain during the application. The reaction was moderate, and a fortnight later the condition was carefully examined. The patient expressed herself as practically quite well. The condition of the iris had greatly improved, its surface was quite bright, there was no photophobia, and the precipitate on the cornea had almost entirely cleared away. The neuralgic pains had entirely disappeared. There was still some anæsthesia of the skin of the forehead, and also of the cornea and conjunctiva. I made another application through an electrode of 3 square inches, and passed a current of 5 milliampères for 15 minutes. I saw my patient a fortnight later, when the eye appeared to be completely recovered. There had been no subjective symptoms in the interval, and there was then only a slight anæsthesia of the skin of the forehead and also of the conjunctiva. The corneal nebulæ seemed to be smaller. The corrected vision was 6/9, there being a myopia of 6·5 D.

I am not prepared to give any explanation of the rationale of this treatment, which was attempted on purely empirical grounds, and although the number of cases thus treated has not been sufficient to allow of the elaboration of detail, the results have been so striking that I venture to think it will prove an advance in the therapeutics of this very difficult condition. Unfortunately it does not offer any hope that the pustulation and scarring which are so disfiguring will be remedied, but as this destruction of skin appears to be due to the staphylococci, normally present in the skin, infecting the vesicles, it appears possible, by preparing a vaccine from the cutaneous staphylococci and injecting it before the stage of pustulation has occurred, to greatly modify, if not obviate, the suppuration and subsequent scarring. Unfortunately none of my cases have been seen in a sufficiently early stage to allow of such an experiment being carried out. I bring the suggestion forward in the hope that it may be tried in suitable early cases.

Harley-street, W.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

CLINICAL SECTION.

Exhibition of Clinical Cases.

A MEETING of this section was held on March 14th, Dr A. E. GARROD, Vice-President, being in the chair.

Dr. F. PARKES WEBER showed a case of "Baggy" Subcutaneous Fat, simulating Symmetrical Œdema of the Legs. The patient was a woman aged 40, who looked much older. She had been married 12 years, but had had no children and was never pregnant. Menstruation ceased six years ago, and for the last six years she had been ailing, chiefly from bronchitis. She also had mitral stenosis and irregularity of the cardiac action. The thyroid gland could not be seen or felt distinctly. By Roentgen ray examination the pituitary fossa appeared to be small. There was chronic swelling of the subcutaneous tissue of the legs below the knees of one or two years' duration. This was symmetrical and in both legs tended to "bag" above the ankles. It either did not "pit" at all, or it (sometimes) "pitted" slightly on pressure, and it felt as if it were due to accumulation of loose subcutaneous fat. Dr. Weber believed that in similar cases the swelling had been supposed in France to be due to a chronic œdematous degenerative process in the subcutaneous fat cells. In the present patient there was a less marked and more elastic "puffiness" of the subcutaneous tissue of the forearms about the wrists. He had no doubt that the "pseudo-œdema" in the present and similar cases was like the elastic symmetrical swelling of the subcutaneous tissue of the fingers and hands, sometimes met with in younger women, in some way connected with a disorder of internal secretions, especially of the thyroid gland and ovaries. The condition was to be distinguished from the true chronic œdema of the lower extremities of doubtful origin (including some cases which have been classed as "rheumatic œdema," "gouty œdema," or "arthritic œdema") sometimes met with in men past middle life independently of kidney disease or circulatory failure. Thyroid treatment had been tried in the present case, but only for a short time and with indefinite result.

Dr. WEBER also showed a case of Hypoplasia of the Right Limbs of Cerebral Origin. The patient was a rather tall and thin young woman aged 20. Her right upper and lower extremities were slightly shorter and decidedly weaker and smaller in regard to muscular development than her corresponding left limbs. The difference was least marked in the legs below the knees, the calf muscles of the right leg looking so much smaller than those of the left leg, as at first sight to suggest a result of old infantile paralysis. There was, however, no history of an attack of infantile paralysis or of any kind of paralysis whatever. Her right arm and leg had always been smaller than her left arm and leg as long as she could remember, and her mother noticed a difference in size between the two legs as soon as she commenced to walk, which was at about the age of 3. She was much stronger in the left hand than in the right and she was left-handed, having always preferred to use her left hand for any work, though at school she was taught (with difficulty) to use her right hand for writing. The right half of the thorax appeared to be slightly smaller than the left half, but there was no obvious difference in development between the gluteal muscles on the two sides or between the two halves of the abdomen. The right shoulder muscles were decidedly smaller than the left. There was considerable facial asymmetry, but it was not easy to say which side of the face was the better developed. The left eyelids were generally wider apart than the right eyelids, but when she showed her teeth the right side of the mouth was opened more than the left. She had a flat foot on the right side with hallux extensus, or habitual over-extension of the right great toe. An orthopædic operation had been performed on that foot five years ago—namely, an attempt to produce arthrodesis—but with imperfect result. The triceps and supinator reflexes were normal on both sides. The knee-jerks were both excessive, but the right one was specially exaggerated and was followed by clonus. The plantar

reflex could not be obtained or was indefinite on the left side, but was active and of decided extensor type on the right side. In regard to sensation there was hypoæsthesia in the whole of the right upper extremity and in the right lower extremity below the knee. Dr. Weber said that, in view of the difference in reflexes between the two lower extremities, one must suppose that the hypoplasia of the right limbs, which especially affected the muscles, was of cerebral origin, though there was no history of infantile hemiplegia of any kind Disease or injury on one side of the brain in very early life might admittedly lead to diminished growth of the limbs on the opposite side of the body, and some pathological condition of the left side of the brain must be assumed to have been the cause of the weakness, the deficient growth, and the abnormal reflexes in the right limbs in the present case.

Dr. W. ESSEX WYNTER showed a case of Arthritis with Baker's Cysts. The man exhibited cystic developments in connexion with three joints. Three years ago pain, stiffness, and enlargement had occurred after a twist of the left knee. The patella was enlarged, and there was considerable thickening of the synovial membrane. Fluctuation could be elicited across the front of the joint, which showed limitation of movement, especially when the weight of the body was put upon it in walking. There were extensive cystic developments on the outer and posterior aspects which communicated with the joint. The external condyle of the femur was irregular in outline as viewed by X rays. The knee and pupil reflexes were present. There were no nervous symptoms, but on two occasions a trace of albumin had been found in the urine. About a year ago a swelling occurred in the left wrist after strain in digging. This had the appearance of a compound ganglion of the flexor sheath, and there was also limitation of movement, extending to the little finger. Fluctuation could be appreciated between the palm and wrist. X rays disclosed thinning of the bones of the hand. There was some wasting of the interosseous muscles, and slight ulnar deviation of the fingers. Six months ago pain and swelling occurred in the right elbow with limitation of movement, so that the hand could not be carried to the mouth. The olecranon appeared to be enlarged, and there were extensive cystic swellings on the radial and ulnar side, which communicated through the joint. X rays showed considerable changes in the ulna with much thickening in front of the elbow. Though these cystic developments in connexion with joints had been described in connexion with rheumatoid arthritis, this case showed neither the anæmia nor type of polyarthritis commonly seen and the small joints were not affected. The character of the lesions did not resemble that of Charcot's joints, and there were no nervous symptoms. Wassermann's reaction was positive.

Dr. ARTHUR F. HERTZ and Dr. W. JOHNSON showed a case of Progressive Muscular Atrophy associated with Primary Muscular Dystrophy in the Second Generation. 1. The father, aged 41, came under observation six months ago, complaining of weakness, chiefly in the left hand. He was a strongly developed man, and had formerly great muscular power. His occupation necessitated daily overuse of his muscles. He first noticed weakness of the left hand about 12 months ago, which he ascribed to an injury to the left index finger from a chopper. The whole of the left arm gradually became weak, and within six months of the onset the right hand and later the arm became affected. The legs also began to drag about this time, the left being the first involved. About a year after the onset rather rapid wasting occurred in the hands, the weakness having previously been associated with only slight wasting. This continued for about four months, but no further wasting has occurred during the last two months. The legs had recently become rapidly weaker, and he frequently fell in the street. Fibrillary tremor had been marked in the arm, leg, and shoulder muscles. The thenar and hypothenar eminences were markedly wasted in both hands, and the interossei to a less extent. The opponens movement was almost absent, whilst all the muscle movements of the forearm and arm were deficient in power; they were also flabby and smaller than they were three or four years ago. The calf muscles did not appear to be wasted, but some weakness was present. The thigh muscles, especially those on the inner side, were definitely wasted. The abdominal and back muscles both showed weakness. The strabismus which the patient exhibited had been present since birth. At times there was a tendency to nystagmus. The orbiculares palpebrarum were weak, and there was some tremor of the tongue. Examination of the eyes showed nothing abnormal. It was difficult to obtain any trace of tendon reflexes, with the exception of the triceps-jerk. Cremasteric and abdominal reflexes were not obtained; the plantar reflexes were flexor. There had never been any bladder or rectal trouble. Cutaneous sensation was normal. The Wassermann reaction of the blood was negative. The case appeared to be an example of the pure progressive muscular atrophy type of motor neuron disease. The rapid progress of the symptoms, however, was an unusual feature, and it was a remarkable fact that some improvement in general muscular power had occurred during the last few weeks. 2. The eldest son, aged 17, was a well-developed child at birth, and normal in every way up to the age of 8. It was then noticed that he walked with his back arched, and with his abdomen prominent. Soon his legs began to drag, and he used to fall about a good deal. Within three years of the onset he was quite unable to walk. In raising himself from the floor "he climbed up his legs," and his power of walking upstairs was very early impaired. His face had the myopathic character, but there was no marked facial weakness. There was much wasting of the scapular and humeral and thigh muscles, with a corresponding amount of weakness. The hamstrings were much contracted. The calf muscles were large and firm in comparison with the other muscles. The hand muscles were not wasted and the patient was able to make good use of them. The knee-jerks were absent, but the ankle-jerks were present. No arm-jerks could be obtained. He was clearly suffering from the pseudo-hypertrophic form of primary muscular dystrophy. 3. Another son, aged 5, appeared to exhibit a very early stage of pseudo-hypertrophic paralysis, his condition being similar to what was noticed at the onset of his brother's illness. He had the same tendency to arch his back and protrude his abdomen when walking. His calves were well developed and unusually firm. There was, however, no wasting present. In rising from the floor he showed a slight tendency to climb up himself. His condition was still too early for a definite diagnosis to be made, but the association with the other cases made it probable that it was an early stage of a primary muscular dystrophy. There were two other children in the family—one a boy, aged 15, and the other a girl, aged 7, both of whom were perfectly normal. Inquiry into the history of relatives on both sides led to negative results, with the exception of a boy, aged 3, the son of the first patient's brother. For the last six months he had been noticed to be falling about. No wasting was present, but there was a tendency to lordosis of the spine, and to prominence of the abdomen when he walked, and the calves were well developed. It was possible that this boy might also be suffering from the earliest stages of a primary muscular dystrophy.

Mr. T. JEFFERSON FAULDER showed a case for Diagnosis. The girl, aged 17, had noticed a swelling low down in the neck for about three years. She stated that it was increasing in size. It caused no symptoms. There was a tense, elastic swelling in the episternal notch. It did not move with the larynx on deglutition, and no respiratory or cardiac movements appeared to be communicated; it therefore seemed to be a tumour in "Burns's space"; at the same time it was possible that there was a pedicle passing down into the mediastinum. Opinions were invited as to the nature of the tumour.—In discussion it was suggested that it was a dermoid cyst or thymic tumour.

Dr. FILIP SYLVAN showed three cases of Pulmonary Tuberculosis after Gymnastic Treatment. 1. A man, shown at the January meeting of the section, was since quite cured. Vital capacity, 5650 c.c. 2. A man, aged 42. In February, 1909, he had pneumonia in the right lung. During 1910 he gradually developed a cough. In November, 1910, he attended Mount Vernon Hospital, and tubercle bacilli were found in his sputum. In April, 1911, he went to Frimley Sanatorium. He did there graduated labour, which was frequently interrupted by fever. On discharge he felt stronger, but he had still much cough and expectoration, and frequently rise of temperature. In January, 1912, he started work, but after three weeks he had to give it up. In May, 1912, he started gymnastic exercises, and his condition gradually improved and rise of temperature became seldom. Since September, 1912, he had never had fever. Under the right clavicle from the second

to the fourth rib a cracked-pot sound could be heard indicating a cavity of the size of a lemon. In May, 1912, there was crepitation all over both lungs. This had nearly gone. He had been at work for six weeks, and felt quite normal. There was no cough to speak of. 3. A man aged 24. At Easter, 1912, he got a very bad cold and cough, and expectoration increased gradually. During January last he got much worse and lost 1 st. in three weeks. He started gymnastic treatment on Feb. 13th, 1913. Over the left lung was dulness on percussion and crepitation all over; over the right lung slight crepitation behind the shoulder-blade. Vital capacity, 440 c.c. March 8th: Crepitation considerably less; vital capacity, 2650 c.c.

Dr. SYLVAN also showed a case of Myelitis treated with Gymnastic Exercises. The patient was a man aged 36. In January, 1910, he contracted a bad cold, and had very severe pains in the back. After three weeks his legs began to drag, and he gradually lost the use of both legs and had to stay in bed. He went into Middlesex Hospital and was treated for myelitis during six months. Soon afterwards he went to the National Hospital in Queen-square, and was treated as in-patient for three months and as out-patient for 18 months, and he improved a little. In May, 1912, he started gymnastic treatment. The adductor muscles were contracted to such a degree that he could not get his knees apart, and could walk only with great difficulty. He had often a painful cramp in the left foot. On March 5th, 1913, he could walk without difficulty, had no pain or cramps, and could separate his knees quite easily.

Mr. P. MAYNARD HEATH showed a case for Diagnosis. The patient was a male aged 36. In September, 1912, he suffered from a "poisoned finger," which was followed by a swelling in the axilla. These cleared up, but were followed by a scaly eruption below the right knee and over the lower third of the left shin, and by painful swellings on both shins, at the inner side of the left knee and on the right elbow. The scaly eruption had largely disappeared. The swelling in the right leg involved the anterior tibial group of muscles for the greater part of their length. The swelling was very ill-defined, was firm, and the skin and subcutaneous tissues over it were œdematous, especially in the lower part just above the constriction caused by the boot. The swelling was said to get worse at night, and pressure over it caused severe pain. The swelling in the left leg appeared to be confined to the skin and subcutaneous tissues, though it lay over the subcutaneous surface of the tibia. There was an irregular tender nodule in the subcutaneous tissue at the inner side of the left knee, just above the inner condyle of the femur. The nodule about the right elbow had disappeared, though the patient still complained of tenderness in this situation. The man was fairly healthy looking, but he stated that his nose had become red and swollen during his present illness. Well-marked pyorrhœa alveolaris was present. No changes could be found in the blood. The man denied infection with syphilis, and the Wassermann reaction had been negative on several occasions. Potassium iodide up to 100 gr. a day had had no effect on the swellings. The swelling on the right leg was incised on Jan. 9th. The skin and subcutaneous tissues were œdematous and the muscles were found to be converted into a firm, greyish, homogeneous-looking material. Sections of a portion removed were shown. No soft spot was found and cultures from the wound proved to be sterile. When first seen, X ray photographs showed nothing wrong with the bones, but more recent ones showed deposits of new bone on tibiæ and fibulæ.

SECTION OF ANÆSTHETICS.

A Eulogy of Clover.—Technique in General Anæsthesia for Intranasal Operations.—Scopolamine-Morphine-Atropine as an Adjunct in Inhalation Anæsthesia and as a General Anæsthetic.

A MEETING of this section was held on March 7th, Dr. J. BLUMFELD, the President, being in the chair.

Mr. BUCKSTON BROWNE delivered an address on the presentation of Clover's portrait to the section. He said:—"Clover was born on Feb. 28th, 1825, and he died, aged 57, on Sept. 27th, 1882. His life is a splendid example of what can be accomplished by the power of the will—the gardener, as Shakespeare has it, who can produce from gardens or from human bodies desired results, however indifferent the gardens or bodies may be, for Clover's body was a frail one and his health poor. Some men circumstanced as he was would have made no effort, but he, like so many in our profession, which, whatever its faults, cannot be charged with selfishness, made of his very weakness a stimulus to exertion. He determined that the shorter his life was likely to be the harder he would work while it lasted. Clover came from the Eastern counties, a district which can boast of many distinguished medical and surgical names. On turning to the 'Dictionary of National Biography' I find that Clover's great-uncle, the distinguished veterinary surgeon of Norwich, who flourished from 1725 to 1811, Mr. Joseph Clover, is judged worthy by the editor, the late Sir Leslie Stephen, of half a column of notice. This great uncle early in life followed his father's calling of blacksmith and farrier in Norwich, but by extraordinary application he so far mastered Latin and French as to be able to read in the original the best authors on veterinary surgery and medicine. He subsequently devoted his life to veterinary science; he invented an apparatus for the cure of broken tendons and bones in horses, and in 1753 he became the discoverer of the manner in which the larvæ of bots are conveyed from the coat of the horse into its stomach. We have thus a very interesting example of qualities appearing in one generation after another in the same family, for the Clover of whom we speak to-night was in his very essence a creator, an inventor, and this quality of mechanical invention deserves, I think, to be called genius, for fundamentally genius means the begetting, the creating faculty. Clover was educated at University College Medical School and Hospital. He was a student there when anæsthesia first came before our profession as a practical matter (1845), and he at once ardently threw himself into its special study. His admirers can claim him as the pioneer anæsthetical specialist, for he immediately devoted himself as a practitioner entirely to the assistance of surgeons and dentists in their more painful operations. He was a man of perfect punctuality and method, patient and kind, not only to his patients, but to the younger professional men with whom he came in contact. He was generous with regard to fees, naming his fee, but always accepting the *bona fides* of his colleagues when they, as is often the case, have to plead mitigating circumstances. In presenting this frame to the section containing his portrait and an important autograph letter, which I am so glad that you have accepted, I feel compelled to say that I think when Clover decided to throw in his lot entirely with the fortunes of anæsthesia, that anæsthesia's gain was general surgery's loss, for Clover was a very great surgical inventor, and one of his inventions in surgery must influence that art as long as the world endures. Benjamin Disraeli asks in one of his novels, What is a great man? and after dismissing gentlemen in Windsor uniforms, *et hoc genus omne*, as not necessarily deserving the name, decides that a great man is the man who influences the mind of his generation, and since Clover influenced the surgical practice of his generation, and probably that of all succeeding ones, I desire distinctly to claim for Clover the title of a great surgeon. I base his greatness upon his contribution to the surgery of stone in the bladder. One of the greatest boons conferred upon suffering humanity during the surgically glorious nineteenth century by our generous and unappreciated profession was the gift of lithotrity, or the art of removing a stone from the urinary bladder without the employment of the knife. Civiale, of Paris, was the father of the art of actually breaking up and crushing the stone as it lay in the bladder by instruments introduced by the natural passage, but Clover, of London, was undoubtedly the father of the art of completely and immediately removing from the bladder all the fragments so made. His evacuating tubes and rubber bottle alone rendered possible the modern operation of lithotrity at one sitting, and so conferred an inestimable boon upon mankind. And more even than this can be said, for while no single man can claim the modern lithotrite or stone crusher as his invention, Clover's evacuating apparatus is practically as useful to-day as it was when first made public in the pages of THE LANCET of May 11th, 1866—for I should be content and happy to use it, just as it left his hands, if I had to perform lithotrity to-morrow. All modern evacuating bottles or aspirators are essentially Clover's. Great modifications have been suggested and employed by Sir Henry Thompson, and by Professor Bigelow, of Boston, and many others, but all have been abandoned,

and the evacuator of to-day is essentially and practically Clover's. The same can be said of Clover's evacuating tubes; he urged that they should be short, not of large calibre, and furnished with stylets. Since his paper was published long tubes, large tubes, and non-styleted tubes, have been used and recommended by operators—and have all been abandoned. Clover proved that the smaller the tube the brisker the current of water in it, and that the shorter the tube the more rapidly the broken stone was withdrawn and caught by the bottle. Much might be said about Clover's minor surgical inventions and suggestions, but I have said all that I think is really necessary, for I am imbued with a sincere desire to be just, and nothing more. The last century was, surgically speaking, the most marvellous that the world has ever seen, and throughout that century the surgeons of the British Empire led the van of the army of progress. What I have said of Clover can only be said of some dozen or so of these British pioneers—namely, that he was an originator, and has left an abiding mark upon the practice of his profession. I am, therefore, justified in calling Clover a genius and a great surgeon."

Dr. DUDLEY BUXTON followed with an eloquent tribute to Mr. Clover, whose outstanding quality was a great mastery of detail and patience in the pursuit and application of knowledge. Those who in the present day were in the enjoyment of the aftermath of such labours as his did well to pause sometimes and try to appreciate the painstaking stages by means of which advances now participated in were achieved. Clover was really the scientific adviser to the Royal Medical and Chirurgical Society committee formed in 1864 to inquire into the giving of anæsthetics, and he showed how much he was imbued with the teaching of Snow. Clover was his own mechanic, and the apparatus which he placed before the profession represented numerous stages of trial and experiment carried out by himself. He congratulated the section on doing homage to so great a man.

Mr. H. BELLAMY GARDNER read a short communication on the same subject, and pointed out that Clover appeared to have been the first man in England to apply a face-piece for the administration of nitrous oxide gas, the first demonstration of it having taken place at the London Dental Hospital in March, 1868.

Mr. GARDNER also read a paper on Technique in General Anæsthesia for Intranasal Operations, in which he stated that in order to obtain the ideal conditions for such work three principles were necessary for agreement between the surgeon and anæsthetist: (1) that the nasal cavities should be cut off from the upper air passages by the insertion of a captive post-nasal sponge after anæsthesia had been established; (2) that adequate ischæmia was only attained by the insertion of pledgets of cotton-wool soaked in a solution containing 2½ per cent. of cocaine and 1 in 2000 adrenalin one hour before the operation; and (3) that it was permissible and desirable that the patient should be anæsthetised in the sitting position with the feet horizontal *ab initio* either with the C.E. mixture or chloroform. He gave as reasons for the adoption of these principles: (1) that all danger of invasion of blood into the lungs could be thus avoided; (2) that the surgeon's work was much facilitated by the absence of blood spraying over the operation area during expiration, and also semi-asphyxial turgescence of the mucous membranes due to irregularities in the respiratory rhythm, and in addition by the viewing of the intranasal parts in their normal relations as in the consulting-room; and (3) the reduction of the total loss of blood and also of shock by the obtruding influence of the local anæsthetic solution. In his view it was not so productive of depression to induce and maintain chloroform anæsthesia in the sitting position by a specialist as to move a patient when he had been lying down under chloroform.—Dr. G. A. H. BARTON found that surgeons did not usually prefer the upright position for some of the operations described, including turbinectomy. He favoured abstention from giving alkaloids in cases of operations on the frontal sinus, where free hæmorrhage was likely to occur.—Dr. W. J. MCCARDIE said the practice in such cases adopted for the surgeons with whom he worked was before the general anæsthetic to use as an injection six drops of adrenalin to which was added 5 per cent. solution of cocaine in 6 c.c. of distilled water, and for intranasal operations the lying-down posture was adopted.—Mr. H. E. G. BOYLE said the surgeons with whom he worked preferred to have the patient lying on the side, the head being turned well over to the side, and resting on a sand-bag; then any escaping blood collected in the dependent cheek, from which it could easily be sponged away. Post-nasal sponges were not necessary when this position was adopted. The surgeon could sit down and perform the operation in comfort.

Dr. A. F. MORCOM read a paper on Scopolamine-Morphine-Atropine as an Adjunct in Inhalation Anæsthesia. He suggested that the dose should be hyoscine hydrobromide, 1/120 gr.; morphine tartrate, 1/6 gr.; atropine sulphate, 1/100 gr.; and that this should be given three-quarters of an hour before operation. When this was done he found that in the majority of cases the patients became drowsy and fell into quiet sleep, which enabled the anæsthetic to be given without waking the patient, and so was of great value, especially with nervous people, as they were then spared the nerve-racking preliminaries of the operation. He further pointed out that less anæsthetic was required when this injection had been given, and that after the operation the patients continued to sleep for some hours and woke without any feeling of discomfort. In his experience post-anæsthetic vomiting in the cases that had had this preliminary injection was almost non-existent—about 6 per cent. It had been said that it was difficult to obtain proper relaxation of the abdominal muscles when this injection was given, but in his experience this only applied when the upper half of the abdomen was being operated upon, and did not apply to operations below the level of the umbilicus.

Mr. LIONEL E. C. NORBURY read a paper on Scopolamine-Morphine-Atropine as a General Anæsthetic. His experience had been limited to six cases, but these had been sufficient to show that the mixture had great possibilities, especially for patients suffering from diabetes, phthisis, severe bronchitis, sepsis, and severe cardiac or arterial disease. The dose given was: morphine tartrate, 1/6 gr.; hyoscine hydrobromide, 1/75 gr.; atropine sulphate, 1/150. This was given two hours before operation, and was usually sufficient, but if not a further injection of morphine tartrate ¼ gr. was given 15 minutes before operation. It appeared to be safer to do this than to give another injection of the mixture, but in some cases this could be done. In three of the cases local infiltration of the skin with 1 per cent. solution of novocaine was employed in addition. In one case it was necessary to give a little gas for the preliminary incision to be made, whilst the subsequent operative proceedings were carried out in comfort. There was no shock or pain after the operation, and the patients slept for some hours afterwards, in one case four hours after the operation. The respirations dropped to 8 per minute and were "Cheyne-Stokes" in character, but the patient readily responded to a hypodermic injection of strychnine. Relaxation of the muscles was not easily obtained with the mixture alone. The injection appeared to be of most value in amputations on diabetic patients, since there was no shock and no danger of "acidosis" and coma.—The PRESIDENT said opinion was still divided as to the value of scopolamine in conjunction with a general anæsthetic. The dislike of it by some surgeons seemed to be based on the rigidity caused by it; he had had cases in which a longer time was required to produce relaxation. He now used a mixture of 1/6 gr. omnopon, 1/100 gr. scopolamine, and 1/100 gr. atropine. The use of scopolamine certainly did not detract from the surgeon's and the anæsthetist's difficulties, but the patient was often grateful for its use.—Dr. W. W. H. TATE did not consider that scopolamine impeded the surgeon's work, but sisters and patients were agreed that a much better period was spent after the operation in cases where it had been used.—Dr. LLEWELYN POWELL remarked that nurses were of opinion that when scopolamine had been given it was more difficult to know whether the patient was in danger some hours after the operation.—Dr. MCCARDIE did not see the need for adding atropine to the mixture. The morphine, of course, damped down the respiration and made matters easier for the surgeon. After these alkaloids were used there seemed to be more oozing than without. When using ether he gave a fairly large dose of alkaloids.—Dr. WILSON remarked on the excessive thirst of young patients who had had morphia before the general anæsthetic.

SECTION OF PSYCHIATRY.

Recent Investigations on the Bio-chemistry of the Neuron.—Exhibition of Cases.

A CLINICAL and laboratory meeting of this section of the Royal Society of Medicine was held on March 11th at the London County Asylum, Claybury (through the courtesy of Dr. Robert Jones, medical superintendent), Sir GEORGE SAVAGE, President of the section, being in the chair.

Dr. F. W. MOTT illustrated and described some Recent Investigations on the Bio-chemistry of the Neuron. He showed by means of the ultramicroscope the living nerve cell. It was a viscous homogeneous colloidal spongioplasm containing an enormous number of minute oval or round granules, which on a dark ground appeared highly refractile. The nucleus, with nucleoli in the centre, was less refractile. When the isotonic fluid was replaced by water, endosmosis occurred, and the refractile granules escaped. They remained discrete and exhibited a Brownian movement, but did not coalesce. Probably each granule consisted of a colloidal fluid substance surrounded by a delicate membrane.

Dr. MOTT also demonstrated the Spirochæta Pallida (Noguchi) in culture living; likewise changes in the central nervous system in a case of myxœdema, cachexia strumipriva and insanity, in which the thyroid was of normal size, but the gland tissue was replaced by fibrous tissue. He also demonstrated changes in the central nervous system in an English and an Egyptian case of pellagra. The English patient had not been out of this country, and the Egyptian case came from a maize district where the grain was of very poor quality.

Dr. ROBERT JONES exhibited two cases for diagnosis. The first was that of a single man, aged 35. He had threatened to commit suicide, and occasionally showed signs of violence towards others, for which he was certified. He had now congenital imbecility with depression. His articulation was jerky and his gait ataxic. During voluntary movement he showed a coarse tremor. There was neither paresis nor wasting, and his electrical reactions were normal; there was no nystagmus, and pupillary reactions were sluggish; discs were normal, knee-jerks were increased; flexor response. Father and brother were insane, mother and sister died from consumption. The second case was that of a man, aged 44, who developed suicidal melancholia. He considered he had general paralysis and was going to die; he was greatly depressed and irritable, and there was progressive mental weakness. He had slurring of speech, increasing, atony of voluntary muscles, fine tremor of tongue and facial muscles; no nystagmus or disc changes. Knee-jerks increased; the Wassermann reaction and lymphocytosis were negative. His mother and maternal aunt were insane.—Dr. S. A. K. WILSON considered the first case was one of congenital cerebellar defect.—Sir DAVID FERRIER agreed, and included the second case in the same group.

Dr. C. T. EWART showed an interesting case of Katatoniac Stupor in a girl aged 22. She had rigidity and mild negativism, but no stereotypy, echopraxy, or echolalia. Her habits were clean, but she had not menstruated since admission. Her answers to questions were only monosyllabic. At school she was quick, cheerful, and industrious. Her mother drank to excess during the pregnancy. Efforts were now being directed, by Turkish baths, &c., to restore the menstrual function, and he gave a hopeful prognosis. He next showed a woman, aged 32, who exhibited "washing mania." She had melancholia, with suicidal tendencies, and any soiling of her linen gave her much worry. She had had other distresses, including financial. There was no evidence of an insane heredity. Dr. Ewart said the washing was a motor response to a sensory experience, just as the music of a waltz impelled certain muscular movements in the hearer. He elaborated an interesting analysis of the motives which caused women to derive pleasure from the wearing of exquisite clothing, and showed that the beautiful and the desirable standards varied with the particular society in which the person dwelt.

Dr. F. PAINE showed a case of Osteitis Deformans in a man, aged 75, who also had aural hallucinations and delusions of persecution. Also a man, aged 46, with Organic Disease of the Nervous System presenting somewhat similar features to those of general paralysis of the insane. The Wassermann test was negative, and there was no lymphocytosis. He had spastic paraplegia and well-marked aortic regurgitation. He also showed a case of Cerebral Tumour to illustrate the value of the operation of decompression.

MEDICAL SOCIETY OF LONDON.

Rapid Section of Tissues for Microscopical Diagnosis.—Celluloid Splints.

A MEETING of this society was held on March 10th, Sir W. WATSON CHEYNE, the President, being in the chair.

Mr. E. H. SHAW gave a demonstration of a method of Rapid Section of Tissues for Microscopical Diagnosis. He said that it occurred to him that a demonstration of the method of cutting frozen sections of fresh tumours and diseased tissues at the time of operation might be of interest to the society. This method was one which had taken its place in the routine work of many surgeons, and its value in the diagnosis of obscure tumours had been proved over and over again. There were, however, still some gentlemen who were not satisfied in their minds that the method could be relied upon, and this was one of the reasons for his appearance there that evening. He would point out at once that there were two factors to be taken into account: first, the manual dexterity required to cut a frozen section, and secondly, the knowledge and experience of the pathologist in interpreting the sections so obtained. The first was soon acquired with a little practice, but the second was much more difficult, not on account of the difficulty of recognising the tissues seen in their fresh state, but of the need of experience in interpreting their nature. He showed some lantern slides made from actual fresh sections which he thought would convince Fellows that good sections could be obtained by this method. The stain used in all cases was methylene blue, and the sections were mounted in the watery solution of the stain without any previous fixation or clearing. This colour did not lend itself easily to the production of sharp photographs, and the water gave the sections a rather glistening appearance, so that the photographs did not show so well as the actual specimens. As he had remarked in a previous communication: [1] "There are many cases in which the diagnosis of malignancy of a tumour can be made at once by a naked-eye inspection—such as an ulcerating or fungating carcinoma of the breast or tongue. Others in which the same diagnosis can be arrived at directly an incision is made into the growth. Lastly, there is a group of cases in which an accurate knowledge of the malignant or innocent nature is not possible without a microscopic view of the section. The last group is the one in which a rapidly prepared section is of the greatest value." The organ which presented more problems for clinical diagnosis than any other was the breast, but tumours occurred in many other parts which were difficult to diagnose. Such regions as the mouth, jaws, abdomen, and limbs often presented problems for microscopic examination. His experience of this work extended over nearly 14 years, and he was convinced more than ever that it was a most useful method and one that should be used much more generally than at present. Such severe and extensive operations as the complete removal of the breast, pectoral muscles, and axillary contents for a condition which afterwards proved to be mastitis only, or amputation of a limb for an inflammatory swelling, should not be done when it was possible to make a correct diagnosis by means of a microscopic section at the time of operation.

Mr. H. J. GAUVAIN read a paper on the Use of Celluloid in the Mechanical Treatment of Tuberculous Disease of the Spine. The history of the use of celluloid in the manufacture of orthopædic appliances was outlined and its chemistry touched upon. The alleged drawback of its inflammability was considered, and it was pointed out that used in the manner described danger was almost negligible. It could, however, be avoided altogether by combining calcium chloride with the celluloid in solution in acetone according to the method devised by Miss Butler, formerly plaster sister at the Alton Hospital. Jackets made of celluloid were light, elegant, rigid, strong, slightly elastic,

[1] THE LANCET, Sept. 24th, 1910, p. 940.

not affected by the heat and moisture of the body, maintained their shape indefinitely, were comparatively easy to make, comfortable to wear, and highly efficient. Moreover, they could be made by the surgeon treating the case. For their manufacture the first essential was a good cast of the trunk or limb for which the splint was required. The technique necessary for obtaining such a cast was described. On the cast made a vest was accurately fitted and impregnated with celluloid dissolved in acetone. On the acetone evaporating the celluloid remained deposited in solid form in the interstices of the vest. Layers of muslin were then applied, each in turn having celluloid solution incorporated until the necessary thickness was attained. The splint was then removed from the cast and tried on the patient and all unnecessary parts removed. Mr. Gauvain emphasised the need for accurate fitting around the whole of the pelvic brim and around the counterpoints of application—the clavicles, or in high jackets the mastoid processes and occiput. He urged the necessity of a big ventral window which, in his opinion, should be cut in all jackets. He strongly deprecated the use of axillary crutches. The paper was illustrated by numerous lantern slides and models showing the whole process of the manufacture of these splints, which in Mr. Gauvain's opinion were destined in many instances to supersede all removable spinal jackets in their present form. He equally favoured celluloid splints in the mechanical treatment of all forms of tuberculous joint disease, infantile paralysis, talipes, genu valgum and varum, Charcot's disease of the knee-joint, after osteotomies and fractures, and in other conditions. Non-inflammable celluloid should be of the greatest value in the manufacture of artificial limbs by reason of its lightness and rigidity.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Syphilitic Disease of Bones and Joints in Children.

A MEETING of the society was held on March 7th, Dr. G. P. SHUTER, the President, being in the chair.

Mr. OSWALD L. ADDISON read a paper on Syphilitic Disease of Bones and Joints in Children. He confined his remarks to some of the commoner rather than the rarer types of the disease, and in introducing the subject stated that it seemed possible and even probable that many cases of syphilitic disease in children were acquired and not congenital. It was remarkable how often a confirmatory history of the disease in the parents could not be obtained, and in his experience of the cases he was about to describe the classical signs of congenital syphilis, as taught in the text-books, were conspicuous by their absence. This teaching was responsible for a large number of cases passing under a false diagnosis, usually tubercle, but within the last few years a diagnosis had only to be suspected for the question to be settled by a Wassermann reaction. The first condition to which he wished to draw attention was syphilitic epiphysitis, a most unhappy name, for although the disease appeared at first sight most marked about the joints, in reality it was most advanced at the ends of the diaphysis. It occurred at any time from birth up to the end of the first year, most frequently in the third month. It was seldom strictly monarticular, though as a rule the signs were most marked about one joint. The condition was nearly always present in a syphilitic stillborn child, and when present in a living child at birth commonly affected all the long bones. In an older child it appeared at first in one joint only, most often the shoulder; but a careful examination usually showed that most or all of the bones of the same or both arms were affected, though in a lesser degree. The bones of the lower limbs were much less frequently involved. It was common for a mother to bring up a baby with the statement that the child was quite well until a few days previously, when she noticed it scream on being washed or when the arm was moved. The child was often a fine healthy-looking baby, the only sign being that one arm was limp and motionless—pseudo-paralysis. A further examination revealed some tenderness and slight swelling about the shoulder-joint, and not infrequently in a less marked degree about the arm, elbow, and forearm. Rapid recovery took place under suitable treatment, and this consisted in complete rest of the affected limb for about a fortnight, combined with mercury inunctions. The usual bone affections seen in these children after the age of infancy were periostitis and osteomyelitis. The former led to the formation of nodes on the skull or long bones, and if extensive to a general thickening. Periostitis was uncommon under four or five years of age, but might occur up to 25 or even later. Although the subcutaneous bones, especially the tibiæ, appeared to be affected most commonly, it seemed probable that this distribution was more apparent than real, for unsuspected nodes on the other long bones were frequently detected on X ray examination. In the early stages the symptoms were slight, often but little tenderness and less pain, but later the tenderness increased and the pain might become severe. In the diffuse form affecting the tibia an apparent bending of the bone was produced from a deposit of new bone along the anterior border and on the subcutaneous surface. The diagnosis from new growth was not, as a rule, difficult, but from other chronic inflammations a correct diagnosis might be clinically impossible until a bacteriological culture or a Wassermann reaction had been obtained. Treatment was by inunction and the administration of potassium iodide, but with great thickening and severe pain operative procedures gave the best relief. Osteomyelitis affected chiefly the long bones, and again the changes were most marked at the ends of the diaphysis. Having outlined the changes which took place in the bone, Mr. Addison said this condition was uncommon before the age of 9 or 10, and was often singularly painless, the patient being brought up on account of chronic sinuses or abscesses about the limb. As the most advanced disease was immediately beneath the epiphysial cartilage interference with the growth of the bone was usual; sometimes overgrowth, but more often shortening, resulted. Treatment by drugs was efficacious in the early stages, though where sinuses were present vigorous operative treatment was necessary. Healing of the wounds was very slow on account of the secondary infection which was always present. Lastly, Mr. Addison dealt with the only two forms of syphilitic joint disease at all frequent in children—i.e., symmetrical serous synovitis (Clutton's joints) and gummatous synovitis. The former was always described in the text-books as the usual type of the disease, but in his experience it was not so common in children as a gummatous synovitis, the reason for this text-book statement being that the gummatous joint was nearly always labelled tuberculous. Gummatous synovitis, usually monarticular, sometimes multiple, mostly attacked one of the larger joints. The synovial membrane and periarticular tissues were swollen in a varying degree, there was no effusion into the joint, muscular spasm and wasting were marked. In fact, all the signs associated with tuberculous disease were present. The X ray appearances might be useful, but were not diagnostic. A rarefaction of the epiphysis was generally seen, and a superficial layer of new bone was often present at the end or ends of the adjacent diaphysis, while the focus of absorption frequently present in tuberculous disease was absent. This condition was not common under the age of four, and in the absence of the other signs of syphilis a certain diagnosis could only be made by the Wassermann reaction. In the unusual event of several joints being affected the diagnosis from rheumatoid arthritis had to be kept in mind. Under treatment perfect recovery of function was the rule, though overgrowth of the bones was not unusual. Symmetrical serous synovitis was commonly seen in the knee-joints, though both elbows and hips might be affected. There was considerable effusion and a varying amount of synovial thickening. The condition was always much more obvious in one joint than the other; in fact, the affection of the second joint not infrequently escaped notice. The symptoms were slight, little or no pain was felt except after prolonged use. Muscular spasm was absent, wasting slight, and the movements were free except for mechanical limitations. X rays showed nothing characteristic and the diagnosis was, as a rule, clear. Treatment was the same in both types of arthritis—i.e., a splint, Scott's dressing, inunction, and iodide. Absorption of fluid and recovery of the synovial membrane were often slow and relapses were apt to occur, but ultimately a normal joint was obtained. In conclusion, emphasis was once more laid on the frequency with which the ordinary accepted signs of congenital syphilis were absent in these cases, and the lesion for which the child

was brought up was the only sign of the disease to be found.

Dr. SYDNEY A. OWEN, in opening the discussion which followed, commenced by urging the employment of the Wassermann test as affording almost certain proof in doubtful cases, and he pointed out that treatment with mercury was of less avail in converting a positive into a negative reaction in congenital syphilis than in the acquired disease. In infants under one year of age an atypical case of infantile scurvy might cause confusion, but the condition usually occurred at a later date than the so-called epiphysitis of congenital syphilis. In children over one year the hyperæsthesia, subjective pains, and pseudo-paresis of rickets had to be kept in mind. Acute poliomyelitis, prior to the onset of definite palsy and loss of deep reflexes, might cause doubt for a short time. In considering acute rheumatism in childhood commencing with the involvement of a single large joint the diagnosis might be difficult in the absence of coexisting endocarditis, nodules, &c. Gonorrhœal arthritis in infants with coexisting ophthalmia did not present difficulties. Dr. Owen also referred to Still's disease, hæmophilia, erythema nodosum, and a case he had seen of Charcot's joint in a patient aged 16 years. In some cases of acute leukæmia tender œdematous swellings at the lower ends of the long bones, especially the tibiæ, occurred.

Mr. W. MCADAM ECCLES remarked that a syphilitic joint in young life, although comparatively rare, was present more frequently than was suspected by many observers. This fact in itself caused errors in diagnosis and consequent failure in effective treatment. Further, the fact that the joint lesion might be the only manifestation of syphilis was again a reason why the true origin of the synovitis was overlooked. In his experience a skiagram always revealed some diaphysial mischief, and this mischief was usually primary, the joint lesion being subsequent.

Dr. J. HUGH THURSFIELD asserted that epiphysitis of syphilitic origin was rare in babies over three months of age, and that in the majority the epiphysitis was not a single phenomenon but was accompanied by an enlargement, often considerable, of the spleen. Another accompaniment not infrequent was laryngitis, sometimes sufficiently marked to render the baby aphonic. This combination of laryngitis and epiphysitis was in his belief pathognomonic. He desired to enter a plea in favour of the continued reputation of Clutton's serous synovitis. It was a fairly common lesion accompanying interstitial keratitis after the age of the second dentition—that is to say, from 6 to 15 years of age. Another manifestation in congenital syphilis was enlargement of the lymphatic glands.

Mr. DUNCAN C. L. FITZWILLIAMS desired to see the words hereditary and congenital as formerly applied disappear. The cause of the disease was a spirochæta always acquired, either before birth, at birth, shortly after birth, or in later life. The immaturity or maturity of the tissues at the time it was acquired caused the reaction of the tissues to differ clinically in the two cases. In the mature state the disease passed through certain stages known as secondary and tertiary, while in the immature state the two stages were jumbled inextricably together. While admitting that the vast majority of cases of epiphysitis occurred under the age of three months, he declined to limit the age incidence as rigidly as Dr. Thursfield. Infantile scurvy he had never seen under the age of 6 months. With regard to craniotabes and Parrot's nodes, syphilis might be a contributory cause of the malnutrition which produced these conditions, but they were not necessarily syphilitic, as both were sometimes well developed in children who did not suffer from that disease. Syphilitic diseases of bone were rarely found associated with the classical signs of congenital syphilis as mentioned in the text-books, and if only one bone happened to be affected and the condition advanced it might be difficult to exclude sarcoma without the aid of the Wassermann test. Gummatous changes in bones were by far the commonest cause of spontaneous fracture in children. For long he had held the idea that many of the cases of what are called bone cysts were really areas of gummatous destruction. Of the joint conditions, the joints full of fluid were the most striking, and when seen were easily diagnosed, as they could be almost nothing else. They were painless and gave rise to no symptoms; hence their frequency was difficult to gauge with certainty. In the gummatous joint the synovial membrane was very thickened, as in tubercle, from which it was most difficult to distinguish it before the Wassermann reaction was introduced, but the presence of fluid in the early stages was diagnostic of syphilis. In his experience these joints were among the most resistant to treatment of all syphilitic manifestations. He had not had satisfactory results with salvarsan in these cases, and preferred the use of mercury. He was coming to regard the Wassermann reaction much in the same light as Widal's reaction in typhoid fever—an indication that the system had been infected previously, and apart from symptoms it was no indication of active disease.

Mr. N. BISHOP HARMAN contributed some interesting statistics he had worked out on a large number of children between the ages of 5 and 16 years of age who were blind, or partially blind, as the result of inheriting syphilis. The majority of these children were typically syphilitic—skulls, faces, eyes, and teeth being definitely marked. Excluding those seen on only one occasion there remained 204 seen on many occasions over several years, and amongst these as many as 23, or 11·2 per cent., had bone disease of some kind or other, either before or during the period of observation, and from a detailed analysis it was found that joint affections occurred in 7, or 3·5 per cent., of the children. In several the bone lesions appeared while the children were undergoing vigorous antisyphilitic treatment for relapsing eye symptoms. In view of Dr. Thursfield's remarks he quoted a series of 100 cases of syphilitic keratitis in which he had systematically examined the knee-jerks, and amongst these he did not find one case of synovitis. In another series, with reference to an investigation on the Wassermann reaction, only one case of synovitis was found.

Mr. RICKARD W. LLOYD, referring to Dr. Thursfield's remarks on the association of synovitis with interstitial keratitis, said he had observed it often enough in connexion with the knee-joints to cause him to seek for it whenever a case of interstitial keratitis came under his notice. The synovitis was not so painful as in ordinary cases of that disease, and as it existed only during part of the course of the keratitis, Mr. Bishop Harman's statistics minimised the frequency of the association of these two symptoms. He had also observed the association of synovitis and corneal inflammation in the course of gonorrhœal rheumatism sometimes.

Mr. P. MAYNARD HEATH drew attention to the fact that in cases of syphilis where one of two parallel bones was obviously affected, an X ray photograph generally showed some affection of the neighbouring bone, and he regarded this as strong evidence in favour of syphilis in doubtful cases. He had noticed in most of Mr. Addison's skiagrams where parallel bones were shown that only one was affected, and he wished to ask Mr. Addison whether he did not commonly find both bones affected in children.

Mr. ADDISON replied to various questions brought forward during the discussion, passed round numerous skiagrams, and showed some patients under his care in illustration of the subject before the meeting.

LIVERPOOL MEDICAL INSTITUTION.

Physiology of Milk Secretion.

A MEETING of this society was held on March 6th, Mr. ROBERT JONES, the President, being in the chair.

Professor E. A. SCHÄFER gave an address on the Physiology of Milk Secretion. He said that the mammary glands, among other peculiarities, gave a secretion in which the chief organic constituents were all formed in the cells of the gland, while the salts were formed in the blood. The flow of secretion was not determined by nerve excitation. The secreting cells did not break down to form part of the secretion, though the free ends broke to liberate the milk constituents formed within them. Transplantation of the gland and its subsequent enlargement on pregnancy and secretion after parturition proved that nerve influences were not necessary. The secretion resembled that of the kidneys, which was known to depend on the amount and quality of the blood, circulating through its vessels, being very sensitive to an excess of (among other substances) those which formed its chief normal constituents—water, urea, and common salt. The posterior lobe of the pituitary body contained a hormone which stimulated the renal secretion, and had been

found to also stimulate the mammary secretion. Professor Schäfer had, with Dr. K. Mackenzie, investigated the effect of the pituitary extract and several other extracts; similar work had been done by Dr. Ott and Dr. Scott. Professor Schäfer had used lactating cats, inserting fine cannulæ into the incised nipples and allowing the milk to fall upon an electrical recorder. Several of these graphic records were shown by lantern screen. The effect of the injection of pituitary extract was one of the most striking experiments in physiology. The milk at first poured from the gland in a continuous stream, the flow gradually diminished, ceasing after 10 to 15 minutes. To produce a second effect it was necessary to wait some time. Successive doses administered at 30 minutes intervals each gave a well-marked secretion, but diminishing in amount. The hormone was present in the pituitary of all vertebrates examined, birds, fishes, amphibians, and reptiles, as well as in mammals. Extract of corpus luteum gave a well-marked galactagogue action, differing from the action of pituitary extract in not being accompanied by a rise in blood pressure. Extracts of uterus after parturition were galactagogue. Extracts of placenta and of fœtus produced an inhibitory action on milk secretion. The effect of the pituitary hormones was to empty the gland as if alveoli and ducts had undergone contraction, squeezing out the milk as if from a contractile sponge, yet muscle fibres had not been observed in the walls of the alveoli. Professor Schäfer showed slides demonstrating the electrical changes which were only found during secretion. Experiments had failed to show that the quality of the milk secreted under the influence of hormone stimuli differed from the ordinary secretion. The total yield of milk had not been influenced by the administration of pituitary extract to cows, though marked stimulation immediately after its injection had been shown. In human beings experiment had given a large temporary increase in the secretion, but the patient had to wait a longer period before again giving the breast. The general conclusions arrived at were:—1. The flow of the mammary secretion was induced as the result of galactagogue hormones circulating in the blood. Such hormones were produced in largest quantity in the posterior lobe of the pituitary body, but were also yielded by the corpus luteum, by the involuting uterus, by the mammary gland substances itself, and perhaps by other organs. 2. Hormones which were formed during pregnancy in the tissues of the fœtus and in the placenta possessed the property of inhibiting the activity of the galactagogue hormones. 3. There was no distinct evidence that the mammary secretion was directly influenced by the nervous system, for the secretion was carried on in a normal manner after the severance of all the nerves passing to the organ. Since the fact was well ascertained that nervous influences did affect the milk, this could only be either by their influence on the general nutrition or by their effect on the production and pouring out of galactagogue hormones. 4. Drugs such as pilocarpine and atropine, which probably influenced the secretion of glands mainly, if not entirely, through nerve endings, had little or no direct influence on the secretion of the mammary gland.

A cordial vote of thanks was proposed by Professor A. M. PATERSON and seconded by Mr. F. T. PAUL. Professor DE BURGH BIRCH, Professor B. MOORE, and Dr. KENNETH MACKENZIE also spoke, and Professor SCHÄFER replied.

MIDLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

Myoma Complicating Pregnancy.—Ligaturing Forceps for Pelvic Surgery.—Localised Septic Peritonitis of Puerperal Origin.—Hysteropexy.—Congenital Intestinal Occlusion.

A MEETING of this society was held at the Royal Infirmary, Leicester, on March 4th, Professor E. MALINS, the President, being in the chair.

Mr. J. FURNEAUX JORDAN showed a Uterus containing a Myoma, the seat of Necrobiotic Degeneration. The tumour had complicated pregnancy, and he had performed hysterectomy a few weeks after labour.—The PRESIDENT remarked upon the small size of the uterine body. Apparently involution must have been extremely rapid.—Mr. CHRISTOPHER MARTIN asked for information as to the pathology of red degeneration in fibroids. Personally he had never seen the condition apart from pregnancy. In Mr. Jordan's case it was remarkable that the tumour had not been the cause of obstructed labour. It showed how easily a large mass would slip up out of the pelvis.—Dr. C. E. PURSLOW recalled the similar specimen that he had shown at a previous meeting of the society, and the discussion that followed upon the pathology of necrobiosis. In his case the neoplasm was cervical in position.—Mr. T. C. CLARE asked if pain had been a feature of Mr. Jordan's case. He believed that Sir John Bland-Sutton was accustomed to diagnose this type of degeneration upon the occurrence of pain only.—Mr. CECIL E. MARRIOTT agreed that red degeneration was usually associated with pregnancy, but he had removed a uterus with a very degenerated fibroid of this nature in which no pregnancy had occurred.—Mr. H. BECKWITH WHITEHOUSE thought that if all cases of red degeneration were collected quite a large number would be found to have no relation at all to pregnancy. Certainly the last few cases that had come under his notice were not associated with this condition.—Mr. JORDAN, in reply, stated that pain was certainly a feature in his case. In fact, a few weeks before term discomfort was so marked that the patient thought that labour had commenced. The apparent extreme involution of the uterus was an artefact, and really due to the preservatives employed.

Dr. N. I. SPRIGGS showed a new Ligaturing Forceps that he had designed for the easy and quick application of ligatures in inaccessible situations, particularly in pelvic surgery.[1] He said the instrument was a combination of a hæmostatic forceps, designed to carry a ligature loosely knotted, with a sliding arrangement for pushing off and tightening the knot. It was rather complicated, but not more so than a tonsil guillotine, and it was readily taken to pieces for cleaning purposes. It had not yet been manufactured in quantity, but inquiries might be addressed to Messrs. Weiss and Son, of Oxford-street, London, W.—The PRESIDENT remarked upon the ingenuity of the instrument, and thought that it might certainly be useful in applying ligatures in some difficult situations.—Mr. C. J. BOND said that he always had some little diffidence in employing very complicated instruments. For ligaturing superficial vessels it would be easier to use the ordinary method, but as regards deep vessels Dr. Spriggs's instrument might be of value.

Mr. H. T. HICKS read a short communication upon Localised Septic Peritonitis of Puerperal Origin. In the treatment of this condition he thought that simple drainage through Douglas's pouch should always be adopted when the local area of infection was within reach. Any attempt at radical removal of a pyosalpinx or an infected ovary was certain to be followed by a severe general septic condition which might be quickly fatal. The parametrium was nearly always also infected, and although the broad ligaments might not contain pus the lymphatics were in such a state that they would pick up bacteria readily, if opened in the course of removal of the tubes or ovaries. Where simple drainage was not possible it was best to wait. The patient must be watched carefully for any signs of extension of the infection. The longer one waited, the less virulent would be the organisms, and, further, by waiting the natural protection against a general invasion might have time to develop. In all cases Fowler's position should be adopted. The complications to be feared if a radical operation had been undertaken were not the ordinary complications which were familiar to all surgeons engaged in abdominal work, but septicæmia in its worst form.—The PRESIDENT expressed his surprise at one remark in Mr. Hicks's paper—viz., that the "streptococcus does not cause as much permanent damage to structures as does the gonococcus." He was of the opinion that gonococcal infections, as a rule, produced a less severe degree of inflammation than did the streptococcus.—Mr. WHITEHOUSE thought that Mr. Hicks had brought forward a most interesting and very important paper. It certainly raised many debatable points, but for his part he was in entire agreement with the conclusions enunciated by the author. The points that he would particularly like to refer to were the importance of simple drainage from below, and the value of

[1] THE LANCET, Jan. 18th, 1913, p. 180.

waiting until the acute symptoms had subsided. The observance of these two facts undoubtedly saved the lives of several patients who would have been lost if more radical measures were employed. With regard to the virulence of the infection, the type of streptococcus probably had some influence in this direction. Mr. Jordan had recently shown that the streptococcus which occurred in puerperal infections was frequently of a specific type, and he had named it the "streptococcus puerperalis."—Mr. JORDAN said that none of the cases brought forward by Mr. Hicks could conveniently be drained by the abdomen. Localised septic peritonitis might certainly be dealt with by the vaginal route, but if septic tubes and ovaries were to be treated, then he thought that an abdominal incision was preferable. As a rule a definite organism was present in these cases, and if possible an autogenous vaccine should be administered. Each case must be judged, however, on its own merits, and the progress of the symptoms was the index for treatment. No rule could be laid down, and in the majority of cases he thought that the more radical the operation the better the result.—Mr. MARRIOTT gave details of a case of pyosalpinx and abscess of the broad ligament occurring 21 days after labour. He had attempted to reach the same extraperitoneally, but had found it necessary to perform laparotomy and drain through the abdomen. The patient recovered.—Dr. PURSLOW asked what material Mr. Hicks used for ligatures and sutures in this type of case.—Mr. HICKS, in reply, said that he always employed catgut sutures where the suspicion of sepsis was present. In spite of Mr. Jordan's friendly criticism, he was still firmly convinced that the best method of treating a puerperal pyosalpinx was that of simple drainage. The infected tube frequently was high up, but nevertheless the pus could be reached by this route, and it was a far safer procedure than that of laparotomy and removal of the diseased appendage, at any rate during the acute stage.

Mr. MARRIOTT read a short communication on cases of Hysteropexy. He referred to the pathology of uterine displacements, and briefly passed in review the various operative measures that had been adopted within recent years to remedy the defect. The operation that he preferred was a modified vaginal fixation, and this he had successfully employed for several years.—Mr. MARTIN had tried most of the various "new" operations that had been devised for the cure of retro-displacements of the uterus, but had come to the conclusion that none were so efficient as the old "ventral fixation." If the sutures were placed below the level of insertion of the round ligaments, then no fear need be entertained if pregnancy should occur. Abortion in these circumstances did not take place. In the case of complete uterine prolapse he thought that there was no better treatment than by Simpson's "shelf pessary."—Mr. WHITEHOUSE said that during the last two years the method of fixation that he had adopted had been the "sling" operation of Clarence Webster. In performing this operation it was necessary to use silk sutures, and also always to suture each round ligament to the uterine wall, otherwise intestinal obstruction might occur from the passage of a coil of small intestine between the uterus and the loop formed by the round ligaments. Out of the last 30 cases treated by this operation there had been one recurrence. One patient was now three months pregnant and the pregnancy was pursuing a normal course.—Dr. PURSLOW remarked with regard to the "shelf" pessary advocated by Mr. Martin that upon one occasion he had had great difficuly in removing one of these instruments from the vagina. It had, in fact, ulcerated completely through the vaginal wall and part was lying in the bladder.—The PRESIDENT observed that the proper use and the abuse of a pessary were quite different things. Dr. Purslow's case was an example of gross abuse of a pessary on the part of a patient, and could not be used as an argument against the proper value of the instrument.

Dr. SPRIGGS read a paper on Congenital Intestinal Occlusion, being an account of 24 unpublished cases, with remarks based thereon and upon the literature of the subject.—The PRESIDENT congratulated Dr. Spriggs upon a valuable communication.—Mr. BOND referred to a patient who had come under his observation upon whom a colotomy had been performed 30 years previously for occlusion of the large bowel. The lumen of the gut below the colotomy was then no more than the size of a lead pencil.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

The Cœliac Affection.

A MEETING of this section was held on Feb. 28th, Dr. J. F. O'CARROLL, the President, being in the chair.

After Dr. PURSER had shown a patient of the President for diagnosis,

Dr. H. C. DRURY read a paper on a case of the Cœliac Affection, the title under which Gee described the condition in 1888. The patient—a girl aged 3½ years—became ill with an apparently ordinary attack of diarrhœa, which, however, persisted and changed to the passage of three or four very bulky motions in the 24 hours. These were like porridge, but white, sometimes frothy, and extremely fœtid. There was no fever, but great lassitude, emaciation, and distension of the abdomen. No treatment was of any avail until she was put on an almost pure meat diet, small pieces of thin, well-toasted bread being the only other food she got. Under this the stools soon became normal, and in a few weeks she began to regain her spirits and increase in weight. The etiology of the condition is not known.—Dr. J. M. FINNY said that the record of the case was of the greatest interest to him. Cœliac disease, he pointed out, was so far free from all pathological definition, but the idea that it was a catarrh of the duodenum and upper ileum seemed to be the most likely. The condition was very rare, and in his long experience he had only a record of three cases. The first case he had was the one which he mentioned to Dr. Drury when the latter consulted him about his case. The patient was a fine boy of about 3 years. His abdomen was doughy, his motions were as large as those of an adult, and he had several of them in the day. He would sit in whatever position he was put, and never ask to be removed, and he appeared to have difficulty in moving his lower limbs, but he was in no way paralysed. Smith's method of treatment was adopted, all milk was stopped, and a meat diet substituted, and the recovery was very rapid, as it was only two or three months before the child got back to ordinary diet. Two other cases similarly treated also made satisfactory recoveries. He never met with a case in his hospital practice, and he wondered if the disease was peculiar to well-fed children.—Dr. O'KELLY gave particulars of the case of a fellow student which in some ways corresponded. Whenever this young man took milk he invariably had a tendency to diarrhœa; the stools became white, and there was loss of flesh. When milk was discontinued the condition disappeared.—Dr. W. M. CROFTON said the case was one of much interest to him, as he had experienced cases in which the stools were white, and the treatment he adopted was to make a vaccine for the catarrh, and this generally cured it. He suggested that all cases of indigestion were due to micro-organisms, and would react well to vaccine treatment. He inquired if any micro-organisms were discovered in Dr. Drury's case.—Dr. CAHILL agreed that a vaccine would have done some good.—Dr. G. E. NESBITT said that the character of the motions would lead one to suppose that the trouble was the defective digestion of the carbohydrates and fats, and treatment with pure proteid would bear out this view. He suggested that there might have been an absence of pancreatic secretions. He thought that if any light was to be thrown on the case a very full examination of the stools was absolutely essential, and not only would fat have to be looked for, but fatty acids. He could not agree with the opinion expressed as to the probable efficacy of vaccine treatment in such a condition as this. He referred to the multiplicity of bacteria in the intestinal tract, and asked how the microbe that would cure this condition was going to be isolated.—The PRESIDENT said he had experience of a case of a little boy aged two and a half years. He was not confined to bed but presented a very curious picture, with a pink and white complexioned face, little thin legs supporting a huge, almost spherical body. At that age, and with a history of having been brought up on artificial food, he thought it was a case of rickets, but eventually the idea of getting a name for the condition was given up, and no information could be ascertained. The little patient was, however, put on a minced

meat diet, much the same as that indicated by Dr. Finny, the meat being rubbed down and given on extremely thin toast and agreeably flavoured with current jelly. On this treatment the child got well, but the treatment had to be renewed from time to time, as he took farinaceous food. He was afterwards called on to treat the child for tape-worm. This was the second case that he had seen of tape-worm following raw meat treatment.

DEVON AND EXETER MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on March 7th, Dr. C. J. Vlieland, the President, being in the chair.—Mr. G. L. Thornton showed a Parsnip removed from the rectum of a middle-aged man. The points of interest were (1) the dimensions of the foreign body—the circumference of the presenting base being 9½ inches, the length 4½ inches, and there being but slight tapering except at the extreme apex, and (2) the somewhat novel method of delivery; the vegetable, self introduced, having been wedged tightly into the bowel during the patient's efforts at removal, the presenting part being about 2 inches above the sphincter. Various forms of forceps having in turn failed to engage, delivery was eventually effected under an anæsthetic, with the aid of an ordinary corkscrew, a firm hold being maintained in the more wooden central portion of the parsnip. Considerable traction was necessary, but in spite of this and the extreme dilatation of the sphincter the appearances were normal on the man's discharge from hospital some three or four days later.—Mr. F. W. Langridge (Ilfracombe) read a paper on Some Reflections suggested by a Bladder Case. The patient referred to was a man aged 55. He had had no previous illness of any importance, and had felt quite well until one day, whilst lifting some heavy bunches of bananas, he "felt something give way inside" him, which was followed with acute pain in the right side of the abdomen, the pain radiating towards the back, but with no tendency towards the right testicle, groin, or thigh. Four or five days later he passed a few drops of blood towards the end of micturition, and at the end of a fortnight the original pain had given place to a pain which arrived at the end of micturition and which was referred to the tip of the penis, the duration of the pain being about two minutes. There was now frequency of micturition to as much as 20–25 times in the 24 hours, the urine passed on one occasion being likened by the patient to crusted port. When Mr. Langridge first saw the patient, ten weeks from the onset of the illness, the pain had become continuous and of a dull aching character, extending along the whole length of the penis but not marked at the tip, and being greatly increased just before and after micturition, when he likened it to the cutting of knives. There was also complaint of tenesmus during urination. Hæmaturia was intermittent and at times copious, but no bleeding followed the passage of an instrument on the two occasions when Mr. Langridge sounded the bladder. Examination of the urine showed blood cells and small clots, but no pus or other evidence of infection. Routine examination of the abdomen and of the pelvis per rectum failed to reveal anything further. In spite of the history of the sudden onset of the illness and of the patient's first sensations, careful elimination narrowed the diagnosis to an affection of the bladder, and, subject to correction after cystoscopy, Mr. Langridge placed malignant growth as the most prominent possibility. The man was then sent to St. Peter's Hospital for Stone, London, and placed under the care of Mr. P. J. Freyer, who examined him with the cystoscope, and reported "a large lobulated tumour with a very broad base growing from the upper aspect of the bladder, right to the orifice of the urethra, which is undoubtedly malignant." Mr. Freyer considered the condition inoperable, and this four months only from the patient's first warnings that something was amiss. Mr. Langridge then dwelt at some length upon the anatomy and physiology of the pelvic organs, together with the developmental relationship concerned, and he demonstrated thereby how the symptom pain at the tip of the penis might be the interpretation of sundry conditions other than a stone at the neck of the bladder. In this connexion he drew attention to the nerve supply of the bladder, and pointed out that the lower termination of the ureter was in the lower vesical segment, and that in consequence a stone impacted low down in the ureter was capable of referring pain to terminations of the sacral sensory nerves, and hence pain at the tip of the penis. The symptom tenesmus was likewise referred to, and Mr. Langridge quoted the writings of Head and Mackenzie in support of his arguments. Turning to the extensive nature of the growth discovered at such a short interval after the onset of the pain, he offered as an explanation that the disease was probably located first in the upper segment of the bladder where on account of the less elaborate network of sensory nerve filaments pain could not be so readily appreciated as would be the case in an affection at the neck; comparable with this was cancer of the rectum, where an extensive growth might cause no symptoms until the lower segment was invaded and pain became a marked feature. In cases where suspicion was attached to either bladder or rectum, Mr. Langridge advocated early investigation by the cystoscope or sigmoidoscope, but only by those especially skilled in the manipulation of those instruments.—In the discussion which followed, Mr. Brennan Dyball had known several cases where pain at the tip of the penis was wanting in vesical calculus, whereas he had found it present in cases of tuberculous cystitis. With regard to the case in question, he suggested that the first symptoms noted by the patient might have been due to a hæmorrhage into the tumour. Pain was frequently a late symptom in these cases.—Dr. J. Raglan Thomas related his personal experiences of renal colic, and stated that in several attacks exact localisation of the calculus by means of his own sensations had been proved to be wrong by the subsequent progress of his case. On another occasion a pain which seemed to him identical with the somewhat familiar sensations of right renal colic was found to be the initial symptom in a right lobar pneumonia.—Dr. William Gordon urged upon the meeting the necessity for the earlier means of diagnosis in these cases, and mentioned that help might sometimes be derived by the finding of cells in the urinary deposit similar to those found in the ascitic fluid in cases of peritoneal cancer. Dr. Gordon also alluded to the cardiac sign in cancer as a means of diagnosis, and stated that experience showed that the sign was gaining in value.—Mr. Ransom Pickard mentioned a case of vesical cancer where cystoscopy demonstrated the condition hopeless from an operative point of view, although the first symptom had only been noted one month previously.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—A meeting of this society was held on March 14th, Professor E. W. Hope, the President, being in the chair.—A paper was read by Dr. Louis C. Parkes on Block Dwellings for the Working Classes in which he said that the problem of improved housing for the working classes—by which was generally meant the lower wage-earning classes—in urban or industrial centres was largely concerned with the provision of block dwellings containing tenements of one, two, three, or four rooms, for the artisan who could afford more than four rooms could generally find suitable accommodation in a small house or cottage or in a suite of rooms forming part of a house. For the large number of workmen who were engaged in regular industries and who had regular daily hours of employment, especially if they had families of children, it was no doubt better that they should reside in the purer air of the country or suburb, but there were still many working people who for one reason or another found it essential to live nearer their work. The class of people who had to be accommodated in block dwellings were workmen or workwomen in receipt of regular wages and those who were for the most part dependent on casual employment and whose earnings were usually an uncertain quantity. As regards the first class, there was no difficulty in providing housing accommodation and making a scheme remunerative, provided the weekly rents were collected a week in advance and the tenants were not allowed to get into arrears. In the case of the Sir Thomas More Buildings in Chelsea only 0·4 per cent. of the gross rental had been lost from empties and "uncollectables" in the eight years during which the buildings had been occupied. They were tenanted by a rather superior class of working people whose earnings were about 31*s.* weekly. In the Grove Buildings, Chelsea, also owned by the Chelsea borough council, the loss from the same cause in two years was 0·7 per cent. of the gross rental. In these buildings no tenant was accepted who earned more than 25*s.* per week,

but most of them were in regular employment. Dr. Parkes criticised block dwellings in two particulars, their height and the absence of playing grounds for the children. Women with families complained of the number of stairs they had to climb in order to reach their tenements, and the courtyards and approach roads could not be used as playgrounds, chiefly because of the noise the children made which disturbed those tenants who slept during the daytime. The success of block dwellings depended very largely on the nature of the administration, and a really capable resident superintendent was an absolute necessity, for he alone could ensure that rules and regulations, which were necessary for the comfort and convenience of the tenants themselves, were properly observed. Dwellings which were left entirely in the charge of a resident porter or caretaker, a man who was of the same or even lower social status than the majority of the tenants, were seldom found to give the best results either financially or socially.—The President referred to the block dwellings which had been erected in Liverpool, and especially to those for the accommodation of the very poor. He emphasised the need for playing-grounds for the children. —Mr. C. S. Joseph, who had acted as architect for many block dwellings, did not think that the vital statistics showed much variation, whether back-to-back dwellings or through dwellings were considered. He advocated a width of space between the blocks equal to their height, and said that the most economical height was five storeys.—Sir Shirley Murphy maintained that back-to-back houses were always stuffy in the morning.—Mr. Herbert Jones referred to his investigations in Yorkshire, where it was shown that there was a much higher death-rate in a large group of back-to-back houses than in a similar group of through houses, although in all other respects the two groups were alike.—Professor H. R. Kenwood contended that habits counted more than environment. He advocated playgrounds for the children, and considered that in block dwellings there should be open balconies for the storage of dust-bins, and that special arrangements should be made for the frequent removal of house refuse.—Dr. Charles Porter complained of the inefficient lighting of the entrance lobbies of block dwellings, and considered that too little consideration was given by architects to the shape of bedrooms.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on March 7th, Mr. Freeland Fergus, the President, being in the chair.—Dr. J. H. Nicoll, speaking of the Avoidance of Unsightly Scar Deformities in the Operative Treatment of Cervical Adenitis, referred to the growth of an opinion among surgeons that complete removal of all the glands from a given region of the neck was not attainable, that by even the most mutilating incisions and dissections only a number of the more obviously affected glands could be removed, and that the same results could be attained by less disfiguring methods. These were:—1. Evacuation of the fluid contents of a "softened" gland by a cannula or aspirator thrust through the skin and subcutaneous tissue—not a good method. 2. Evacuation by means of a small Volkmann's spoon introduced through a puncture made in one of the natural folds of the neck by a fine knife. Both these methods aimed only at removal of the gland substance from within the capsule, and were limited to cases in which one small gland (or two) had softened. The aim of the following two methods was the removal of the capsules with the glands, and by them in some cases large masses of glands could be "tunnelled" out. 3. The method of Treves, of Margate, in which the incision was placed in the first transverse crease above the clavicle (in girls an inch higher), a tunnel made between the incision and the mass of glands, and the mass separated by digital enucleation. 4. The method of Dollinger, of Budapest, in which the incision was made along the lower margin of the scalp in a line downwards and backwards from the mastoid process, and the glands similarly "tunnelled" out. The two latter methods were comparatively easy in young children, but in adults were often tedious and difficult.—Dr. W. R. Jack reviewed recent literature on the subject of Vaccine Therapy in the Treatment of Gonococcal Vulvo-vaginitis, and stated his experience of this method in the treatment of six cases among children. In two cases, one of which was treated by an autogenous and one by a heterogeneous vaccine, a clinical cure was reached after two and a half months' treatment. A third case, treated by autogenous vaccine, was free from symptoms after over three months. In the other three cases, two of which were treated by a polyvalent and one by an autogenous vaccine, the condition remained uncured after two months, five months, and over five months respectively. While these results did not appear very encouraging, it was to be noted that in all the cases a comparatively speedy improvement was attained, the irritation and discharge being much lessened, though in the unsuccessful cases it seemed to be impossible to get rid of this remainder whatever dose was used.—Mr. J. Grant Andrew, speaking of the Operation for Acute Appendicitis, Primary Closure of the Abdominal Wound, based his remarks on the records of 85 cases operated on by him between June, 1910, and February, 1913. In the greater proportion of the cases the appendix was gangrenous in whole or part, and unprotected by adhesions, and in one-third of the cases it had perforated. In a smaller proportion of the cases a localised abscess was present, completely shut off and usually very foul-smelling. In almost every case the appendix was removed and the stump dusted with iodoform or treated with iodine or iodoform emulsion, and in over half the cases bacillus coli vaccine was given subcutaneously. In 80 cases the wound was primarily closed without drainage, and 57 of these healed primarily. In 27 there was some infection of the wound, and in two cases the wound was restitched. In no case was a drainage-tube necessary for the wound alone. There were seven deaths. The list included no simple catarrhal or "quiescent" case; had these been included the mortality would have been under 3 per cent. The results showed that, provided the cause were removed and the cæcal opening thoroughly closed, drainage either by tube or packing could be dispensed with, and primary union obtained with less risk, even under the worst possible intra-abdominal conditions.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on March 14th, Dr. J. Dobson, the President, being in the chair.—Dr. M. Coplans read a paper on the Nature of Certain Toxins and Protein Substances.—Dr. Coplans and Dr. W. Gibbs Lloyd then read a paper on Absorption of Physiological Substances by Asbestos. Both of these communications were of the nature of preliminary notes.—Dr. W. C. Lyons read a paper on Proteose-free Tuberculin.—A specimen of Cerebellar Tumour was shown by Mr. R. Lawford Knaggs and Dr. R. A. Veale.—Dr. M. J. Stewart showed a specimen of Fœtus Acardiacus Amorphus. This fœtus was the twin of a healthy male infant. It consisted of a roughly rectangular skin-covered mass, a trunk-like structure without head or limbs. The umbilical cord was centrally situated on the ventral aspect. A radiograph showed the presence of a spinal column, a rudimentary pelvis, and seven ribs on each side. The only representative of a skull was a small triangular plate resembling a basi-sphenoid. A dissection of the monster revealed the presence of kidneys, ureters, testes, liver, and an inch of bowel. There was no body cavity, and heart and lungs were absent.—Dr. Stewart also showed specimens of Teratoma of the Testis, and specimens of Cancer of the Breast with Squamous Metaplasia.—Professor J. Kay Jamieson and Dr. J. C. Brash showed a dissection illustrating the Distribution of the Auriculo-ventricular Bundle, demonstrated by injection of its sheath. —Dr. Coplans showed an apparatus for the Direct Determination of Electro-conductivity of Liquids, and also an Automatic Self-cleaning Centrifuge.—Other specimens were shown by Mr. H. Littlewood, Mr. G. Constable Hayes, Dr. W. W. Adamson, Mr. J. A Coupland, and Dr. R. A. Veale.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on March 5th, Mr. W. G. Laws, the President, being in the chair.—Dr. H. Michie read a paper on the Treatment of Prolapsus Uteri. He first considered the anatomy and structure of the uterus and explained that there were no true ligaments, but that the uterus was held up by folds of peritoneum and the round ligaments. Prolapse of the uterus was essentially a hernia and occurred most frequently in advancing age and after the menopause. Hard work, coughs, or strain were contributory factors. As a prophylactic he advocated moderate

exercise during pregnancy, patience during labour, and a not too early return to hard work after confinement. Hodge's pessaries or rubber rings sometimes were sufficient. Alexander-Adam's operation of ventral fixation generally cured the prolapse, but often complicated succeeding pregnancies. Dr. Michie had lately devised the following operation. The abdomen was opened in the middle line by means of a small incision, the round ligaments on each side were isolated, and stout silk was passed under the broad ligaments. These were drawn through the conjoint tendon and rectus muscle, and were stitched over the aponeurosis, just immediately below the skin. He had performed this operation 25 times, and all the patients had been relieved; there had been no complications in four cases of subsequent pregnancies; two patients who had incontinence of urine were relieved of this trouble.

Reviews and Notices of Books.

Innere Sekretion. Ihre Physiologischen Grundlagen und ihre Bedeutung für die Pathologie. Von Professor Dr. ARTUR BIEDL, Wien. Zweite, neubearbeitete Auflage. Erster Teil. Mit 131 Textfiguren und 20 Mehrfarbigen Abbildungen auf 8 Tafeln. Berlin und Wien: Urban and Schwarzenberg. 1913. Pp. 534. Price, paper, 24 marks; bound, 26 marks.

The Internal Secretory Organs: Their Physiology and Pathology. By Professor Dr. ARTUR BIEDL, Vienna. With an Introductory Preface by LEONARD WILLIAMS, M.D. Glasg., M.R.C.P. Lond. Translated by LINDA FORSTER. London: John Bale, Sons, and Danielsson, Limited. 1912. Pp. 586. Price 21*s.* net.

IN THE LANCET of April 1st, 1911, p. 885, the importance of the elaborate presentation of the question of internal secretions in their physiological relations and their importance for pathology and medical practice, as set forth by Professor Biedl, was fully recognised. The first edition was dated 1910. Before us we now have Part I. of the second edition, dated November, 1912. The author finds that he must issue the work in two parts; in fact, the presentment of the subject requires more than double the original text. The suggestion made in our review of the original German edition, that the addition of figures and illustraticns would greatly add to the value of the work, is realised in this second edition, which has over a hundred illustrations in the text and eight coloured plates. Practically the whole of the text deals with the thyroid apparatus, the thymus, and the adrenal system. Apparently we are far from anything like an adequate knowledge of the far-reaching effects of even such seemingly unimportant bodies as the parathyroid. What is their relation to calcium metabolism, and therefore to dentine formation? A partial answer to this question will be found in the text.

We are glad to see reproductions of von Eiselberg's figures of sheep with thyroids removed, as well as illustrations of the author's own experiments on dogs. Some illustrations of the physiological effects of thyroid and allied extracts on blood pressure would have been acceptable. Somewhat less than half the text is required to deal adequately with the adrenal system. How strange is the story of these glands from their discovery in 1563 by Eustachius and the epoch-making "quarto" of Thomas Addison in 1855, entitled "On the Constitutional and Local Effects of Disease of the Suprarenal Capsule." Much has happened since then, but we are still far from knowing the full significance of these organs, in regard to which the Académie des Sciences de Bordeaux, in 1716, gave as a subject for a prize essay, "Quel est l'Usage des Glandes Surrénales?"

A complex table printed on four pages gives a general review of the effects of adrenalin as compared with the effects resulting from stimulation of the sympathetic and autonomic nerves. Illustrations of blood pressure tracings showing the effects of adrenalin are introduced.

We most cordially recommend this work as the most compendious presentment of all that is known on the subjects with which it deals. It is one of supreme interest to physiologists and pathologists as well as to practitioners. The author, besides gleaning, collating, and systematising the results of other observers, has incorporated in the text the results of his own extensive experiments and observations.

It seems a pity that the English version, which was translated from the first German edition (1910), should fall short of representing the latest developments in a subject of such growing importance. We cannot help thinking it might have been brought more up to date by incorporating many new facts which have been added since 1910. The English version contains in place of the German introductory preface, written by Professor Dr. R. Paltauf, of Vienna, a brief "Foreword" by Dr. Leonard Williams, physician to the French Hospital, London.

The short introduction of 23 pages, constituting Part I., gives an account of the history of the doctrine of internal secretion, of its physiological basis, and of the general principles upon which the teaching is founded. On p. 16 there is a strange mistranslation, "iodinthyrin in the suprarenals." The statement in the original is perfectly correct. Part II. deals with the internal secretory organs separately, and describes what is known of the nature and significance of their activities, a systematic classification at the present time being impossible. The honour of having first proved the existence of an internal secretion and of having recognised its significance is claimed for Professor A. A. Berthold, of Göttingen, and the date of his demonstration by means of experiment proving the nature of the activity of a true ductless gland is given as 1849. As a whole the translation is well done and gives very fairly the spirit of the original, but the statement "the acid secretion which is elaborated upon the superficial membrane of the stomach" is hardly the exact rendering of the German text. Perhaps also "bile" would be better than "gall," at least in a scientific text-book, while "secretory" might replace "secretary" when applied to organs. "Überlebend" is, we think, best translated by "surviving," a word which has found acceptance in experiments by physiologists on excised living organs, such as muscles and uterus.

The Thyroid Apparatus is first dealt with in ample detail, including some experiments by the author himself. It occupies about 90 pages. Perhaps what the author has to say about Graves's disease will prove most interesting to the practitioner. Some of the names of authors that are misspelt in the original are corrected in the English edition. The footnote on p. 103 and those on pp. 129, 221, and several others might have been incorporated in the text. About 14 pages are devoted to the thymus gland. The use of heavy black type in the original enables the reader to pick out more quickly the salient features in the text.

Nearly 180 pages are given to the Suprarenal System. The translator makes a mistake in describing the author's method of experimenting on these organs, when for the word Haut in "Rückenhaut," the term "cuticle"—and it occurs twice in one paragraph—is used instead of the word skin. The English reader, however, is not likely to mistake what is really meant. The cumbrous German phrase "vegetatives Nervensystem" is literally translated. The "sympathetic system" is better understood, at least in England, and for "lymphagoga" we are more familiar with "lymphagogues." The term "neben wirkungen" is well rendered by "by-effects." The full details of the relation which the toxo-chemical action of adrenalin and

the varieties of suprarenin and hyperarterial tension bear to arteriosclerosis are particularly interesting. The cortical granules in the suprarenal cells are spoken of as "double refractive" to polarised light, and the phrase occurs in subsequent paragraphs. Every here and there one finds some little inexact rendering of the original text—e.g., "intercranial pressure" for intracranial (p. 337). The term "internal findings" is not familiar to English pathologists. On p. 351 we find the "pineal gland" described as "suspended free between the anterior pair of corpora quadrigemina," which is not exactly what is set forth in the original text. The chapter on the internal secretion of the gastric and intestinal mucosa no doubt was up to date when it was written, but two years have elapsed. We might expect more details in regard to secretin. The literature alone occupies from p. 446 to p. 586.

We feel sure that this work, in its original or in its English dress, will find a warm welcome from all those concerned with a subject of the deepest interest to physiologists, pathologists, and practitioners. It is the quarry to which all workers on these glands will turn for detailed information.

An Introduction to the Study of Adolescent Education. By CYRIL BRUYN ANDREWS. London: Rebman, Limited. 1912. Pp. 185. Price 5*s*.

IN his work on adolescent education Mr. C. B. Andrews claims to be suggestive, but most of his readers will find him a good deal more than this. He criticises very severely many of our most treasured traditions; indeed, the greater part of his little book is an indictment of our public school system. He condemns also the sameness, the dreariness, and the narrowness of the methods of elementary education, but he finds less to object to in the educational system which we impose on the children of the proletariat than in that which we impose on the children of the middle and upper classes. He says there is something fitting and appropriate in the dry routine work of the elementary school in anticipation of the colourless lives the majority of its victims are destined to lead. In the public school life there is nothing to prepare the boy for the position of a leader of men. He objects to the discipline which comes from without, and which is forced upon boys in our great public schools. Discipline, he says, should come from within; the only discipline which is worth anything is that which comes of self-assertion, and is dictated by reason. The involuntary obedience which is manufactured in our schools breaks and does not strengthen the will; it saps and does not create character. "It is," says Mr. Andrews, "the discipline of the Russian Government which prevails in our schools as well as in our prisons." The great remedies suggested for the existing evils are the abolition of the boarding school, the institution of self-governing establishments of the character of George Junior Republics, or, if not these, then the combination of the day school and a reformed home life, the substitution of married masters and mistresses for unmarried teachers, the adoption of the principle of co-education, and the systematic teaching of sexual hygiene.

From the purely medical point of view there is much in this book to command attention. On the subject of fatigue, the author describes as mere folly both the attempt to divorce fatigue of mind from fatigue of body, and the belief that bodily exercise can rest the tired mind. This view he considers responsible for much physical and mental wreckage in children. On immorality and sexual perversion Mr. Andrews has much to say which will perhaps inform the medical man, though as a rule he will have heard it all before. Such obvious solecisms as late meals, evening studies, beer-drinking, and overheated dormitories accentuate, but do not cause, the evils referred to, and their remedy may lie in the direction of sexual instruction and coeducation which he advises. The author probably does not know how anxiously alive to the whole subject the modern public school authorities are, but his book, although iconoclastic in many respects, should be of real help to the physician.

Pharmacology and Therapeutics for Students and Practitioners of Medicine. By HORATIO C. WOOD, Junr., M.D., Professor of Pharmacology and Therapeutics in the Medico-Chirurgical College, Philadelphia. London and Philadelphia: J. B. Lippincott Company. 1912. Pp. 429. Price 18*s*. net.

THE study of pharmacology and therapeutics has considerably altered during the past few years, and information is increasing as to the modes of action of drugs and the manner in which they may be combined and used in connexion with disease. Necessarily some of the older text-books of materia medica and therapeutics are out of date and at variance with modern ideas, and a new work which should present the concept of to-day in a form sufficiently concise and comprehensible to be available for the ordinary student would be acceptable. Dr. Wood has attempted to carry out this idea, and in our opinion has been successful in his task. The book now before us is written in a pleasing style, and the information given is clear and concise.

The first chapter deals with certain general considerations, which the student will do well carefully to ponder over. The remarks on prescription writing and on the mode of action of drugs will well repay perusal. The observations on ionic action will also be found of interest, for a proper understanding of this subject is necessary thoroughly to appreciate the manner in which Dr. Wood deals with the mode of action of certain drugs. The author states that he has devoted much thought to attempting to devise a classification which would emphasise both the pharmacological and the clinical relations of drugs. We believe that the arrangement he has adopted will prove of advantage both to practitioners and students. The chapters are divided according to the following headings: Drugs used to affect secretion; drugs used to affect the nervous system; drugs used to affect the circulation; drugs used to affect the alimentary tract; drugs affecting metabolic processes; drugs acting on causes of disease; extraneous remedies; finally, drugs of minor importance. Each chapter is composed of several sections. For instance, in the chapter dealing with drugs used to affect secretion, the sections are: diuretics, diaphoretics, expectorants, and drugs which diminish secretion. In this manner a very complete and comprehensive survey of the whole subject is accomplished. In dealing with individual drugs a uniform method of description is followed. The materia medica is first given, and the official preparations are mentioned; then the physiological action is described, and finally the therapeutics of the preparations are discussed.

We have read the work with much interest, and although the preparations of the drugs are given according to the United States Pharmacopœia, we believe that practitioners in this country will find much to learn from the lessons set down. Students also will be able to form from Dr. Wood's teaching a good foundation upon which to build a knowledge of the principles of pharmacology.

Die Puerperal Wundinfektion. By Dr. ALBERT HAMM, Strassbourg. Berlin: Julius Springer. 1912. Pp. 167. Price 6 marks.

IN the first chapter of this book the author gives a short historical account of puerperal fever, dwelling more particularly upon the distinction which has been made at various times between sapræmia and septicæmia, septic intoxication and septic infection. Increasing experience appears to

show that in the majority of cases the same organisms may cause both conditions, though in the one they remain localised, while in the other they invade all parts of the body, more especially the blood and lymph streams.

Dr. Hamm adopts a classification of puerperal fever which is based on the distinction between cases due to organisms introduced from without, and cases to organisms already present in the patient's body. Among the first variety he includes what he terms spontaneous exogenous infection and artificial exogenous infection, depending upon whether the germs are directly introduced from without or not. In cases due to organisms present in the patient's body he distinguishes artificial and spontaneous endogenous infection, in which the organisms are either inoculated or not, and metastatic infection, in which they are derived from some extragenital source through the blood or the lymph. The main varieties of aerobic and anaerobic organisms which have been met with in cases of puerperal fever are described in detail, and this takes up a large part of the book. The question of the varying virulence of some of these organisms is then considered, as well as the factors upon which this depends. A sound chapter deals with the predisposing causes of septic infection, more particularly with the part played by the retention of products of conception. In the classification of puerperal fever adopted by the author a distinction is made between that form of infection which is limited to the wounds in the genital tract and that which has spread beyond the genital tract, by means of the lymphatics, the Fallopian tube, or the blood stream.

In considering the treatment of retained products stress is laid upon the danger of the curette, and the recommendation is made to remove as much as possible with the finger and to leave any shreds that may remain to be spontaneously evacuated, teaching which will meet with the approval of practically all obstetric physicians in this country. The author takes a gloomy view of the present-day methods of treating puerperal fever, and points out that for the evolution of a satisfactory and reliable method of treatment it is necessary to remember that it is essentially a case of wound infection exactly analogous to surgical septicæmia, and that the old distinction of sapræmia and septicæmia must be entirely given up.

The Snakes of South Africa: their Venom and the Treatment of Snake-bite. By F. W. FITZSIMONS, F.Z.S. New edition. Cape Town: T. Maskew Miller; London: Longmans, Green, and Co. 1912. Pp. 547. Price 12*s.* 6*d.* net.

THIS volume, written in a somewhat familiar style, in addition to the subjects indicated in the title, incorporates also a mass of more or less relevant matter. It is a little surprising to find that the first five illustrations in the book are figures of pterodactyles and of the bird archaeopteryx, though pictures of many snakes follow. The reasons for this divergence from the route laid out for himself by the author is the inclusion of a short preliminary sketch of the position of snakes among reptiles, and the classification of reptiles generally. But it is not clear why the preponderating emphasis in this preliminary essay is laid upon pterodactyles, which have obviously less to do with snakes than perhaps any other group of reptiles. The author gets on to snakes as early as p. 12, and thence remains constant to his subject for 260 pages. After this comes a short section of an introductory nature, where certain physiological facts are described as a preliminary to an account of snake venom, and the curative methods applied to snake bites. This physiological parenthesis is not at all deftly managed, and will cause some doubt in the mind of the reader who thirsts for refreshing fact and reliable information. Numerous headlines occur of a character suggestive of the advertisement of patent cures, such as "The Science of Eating" (p. 294), "What a Famous Physician Says" (ibid.), "The Elixir of Life" (p. 296). The information given as to the mechanism of the body contains extraordinary banalities, such as "Be careful to eat good, plain, wholesome foods," and "Poets and lovers wax eloquent about the heart. ..... Well, the heart is in reality nothing more or less than a self-acting pump." This kind of physiology might be quoted indefinitely. The real object aimed at in this somewhat oblique way seems to be to show the reader how easily snake venom may pass through the blood stream and reach the brain and all parts of the body.

The strong point of the author is his first-hand knowledge of the reptiles in the bush, of their habits generally, and of the local lore concerning snakes and snake-bites. Here he is to be read with interest. As to the classification of the group of Ophidia and the characters of families and genera, the author wisely bases himself upon the well-known authority upon these and other reptiles, Dr. Boulenger, of the British Museum, whose tables he freely quotes. But when Mr. Fitzsimons defines characters for himself, as he does in a summary of the volume, headed "Items of Snake Knowledge," he is not always so happy. He says, and with absolute truth, that "snakes are animals"; but adds the hardly illuminating reason, "inasmuch as they belong to the great animal kingdom." There are other pieces of information in this summary which render it exceedingly difficult to understand for precisely what class of reader the author writes. For example, he tells us that "there is a widespread belief in South Africa that a snake known as the hoop snake swallows its tail and bowls itself along like a hoop." Mr. Fitzsimons gravely adds, "This is not a fact." We had thought that this was a Western story now of some antiquity.

The book seems to be a curious compound of undeniable, if elementary, fact, of genuine personal observation in the field, and of unwittingly humorous banalities.

Lectures on Clinical Psychiatry. By Dr. EMIL KRAEPELIN. Authorised Translation from the Second German Edition. Revised and edited by THOMAS JOHNSTONE, M.D. Edin., M.R.C.P. Lond. Third English edition. London: Baillière, Tindall, and Cox. 1913. Pp. 368. Price 10*s.* 6*d.* net.

WE welcome yet another edition of Dr. Johnstone's translation of Professor Kraepelin's work. The author's fructifying concepts have now become world-wide, and his classification of insanity and re-arrangement of the nomenclature of various syndromes have been generally adopted, with some modification here and there, as that which is at present most convenient. Round such concepts as those of dementia præcox and maniacal-depressive insanity controversy still rages, and, indeed, is likely so to do until some fresh psycho-pathological light splits them, or unifies them with other groups. Kraepelin's great work has been to see and demonstrate the essential similarities that lie beneath seemingly incompatible dissimilarities and to reduce to something like scientific classification syndromes which aforetime lay chaotically in the psychiatrist's field of vision. Much, no doubt, is provisional, but the road upon which investigation should proceed has been clearly pointed out. As clinical lectures the work ranks with the models of such masters as Jenner or Trousseau, and for that reason alone is a pleasure to read. We may almost venture to say that not only have the lectures lost nothing in their translated form, but that they have even gained; but that, of course, is to write from an English standpoint. Dr. Johnstone has written three short appendices, each of which forms a useful

elucidation of the most recent thought upon, and development of, Kraepelin's work. The description of the serodiagnosis of general paralysis strikes us as the most concise and lucid of the many we have read upon the subject.

Manisch-Depressives und Periodisches Irresein als Erscheinungensform der Katatonie. Eine Monographie von Dr. Med. MAURYCY URSTEIN, Warschau. Berlin and Vienna: Urban and Schwarzenburg. 1912. Pp. 650. Price, paper, 28 marks; bound, 30 marks.

THIS volume is supplementary to one already published by the author on the relation of dementia præcox to manic-depressive insanity. In the book under review Dr. Urstein maintains the thesis that manic-depressive insanity and periodic insanity are varieties of catatonia, an episode in the course of that disease. Although the former, for instance, may present a very typical symptom-complex, apparently easy to differentiate from other syndromes, yet it does not constitute a morbid entity, and the longer cases of this designation are under observation, the more certain will it appear that they should be classed with catatonia. Not merely the symptom-complex must be considered in the classification of a given form of insanity, but its origin, course, and termination are just as important in the matter. Dr. Urstein has given in this book a very careful and elaborate clinical investigation of a series of 30 cases, many of which have been under observation for years, and his examinations are characterised by the same excellent psychological analysis as was shown in the companion volume.

This monograph will appeal to the psychiatrist by reason of the critical ability which its author evinces; at the same time the fulness of clinical description is commendable, and the documentary value of the cases is in itself considerable. A monograph of this sort serves to indicate how far off unanimity in psychiatrical classification still appears to be in spite of the admirable work which has been done recently with the view of calling order out of chaos.

Vergleichend-diagnostischer Atlas der Hautkrankheiten und der Syphilis. Von Dr. S. EHRMANN, A.O. Professor der Dermatologie und Syphilidologie an der K.K. Universität, Vorstand der Dermatologischen Abteilung des K.K. Allgemeinen Krankenhauses zu Wien. 312 farbige Figuren auf 91 Tafeln und 191 schwarze Abbildungen im Text: erklärender Text in 29 Vorlesungen. Jena: Gustav Fischer. 1912. Pp. 302. Price 50 marks.

THE assistance which the eye can give in the study of a subject is nowadays much more utilised than it was even a short time ago, but the eye might be used even more, and in no other branch of medicine or surgery can the pictorial representation of disease prove of higher value than in the diseases of the skin. An atlas of skin diseases can afford much assistance to the student in learning his subject even when he has access to a large number of clinical cases; for in the atlas the typical cases are shown, while in practice absolutely typical cases are rare. Professor Ehrmann has collected a very large number of excellent illustrations in this work, and they show very clearly typical forms of diseases of the skin. The coloured illustrations are especially good and the drawings have been very successfully reproduced, but the black and white figures will also prove useful. Most of the illustrations are original, but we notice that some have been borrowed from other works, and a few have been derived from English books.

LIBRARY TABLE.

On Aristotle as a Biologist, with a Prœmion on Herbert Spencer. Being the Herbert Spencer Lecture delivered at the University of Oxford on Feb. 14th, 1913. By D'ARCY WENTWORTH THOMPSON. Oxford: Clarendon Press. 1913. Pp. 31. Price 1*s.* net.—Professor Thompson pays a graceful compliment to Herbert Spencer when he says, "No philosopher of modern times, not Kant himself, has exercised in his lifetime so wide a dominion"—a philosopher who made biology an intrinsic part of his sociology and his psychology. As to the great biologist of antiquity, his work on Natural History was done upon the Asiatic Coast in or near Metylene. The author gives instances out of the storehouse of zoological and embryological facts collected by Aristotle, such as his observations on the cuttle fishes, crustaceans, and fishes in his "Historia Animalum." He regards Aristotle as the "great Vitalist, the student of the Body with the life thereof, the historian of the Soul." This is an erudite and suggestive address, evidently the work of an accomplished zoologist and one familiar with the history of his subject—big in Aristotle's hands, but which has grown to gigantic proportions since his day.

Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India. No. 56. *Malaria in the Andamans.* By Major S. R. CHRISTOPHERS, M.B. Vict., I.M.S. Calcutta: Superintendent of Government Printing. 1912. Price 1*s.* 4*d.*—The Andamans are a group of three large and a number of small islands in the Bay of Bengal, some 200 miles distant from the mainland of Burma. On South Island, at its southern end, is Port Blair, the Indian convict settlement, which, from the point of view of the author, constitutes the Andamans, the rest of the country being trackless forest. There are many points of interest in this secluded region; both flora and fauna bear witness to its isolation. There are no large indigenous mammals except wild pig, no monkeys, no crocodiles. The aborigines are unlike any neighbouring race, and resemble the Bushmen of South Africa; they number only about 2000, and are rarely or never seen. Around Port Blair, which is a long ramifying inlet of the sea, the country has been partially cleared for about ten miles. There are low hills, either forest-clad or partially cleared, with intervening swampy valleys and the ramifications of the harbour and its tidal mangrove swamps. These latter have been reclaimed wherever possible, and form the characteristic salt swamps of the place. The prisoners consist of some 10,000 to 12,000 labouring convicts, housed in barracks placed on elevated sites, and of about 2000 "self-supporters," or ticket-of-leave convicts, who live in scattered villages, some on the hills, some close to paddy land or swamps. There are also some 2000 time-expired convicts or their offspring, called "free residents." Malaria prevails mostly among the labouring convicts, but observation as to its causation is difficult owing to their frequent movement from place to place. Investigations as to the conditions existing among the villages of the "self-supporters" have been carried out to begin with. Major Christophers found that the chief carrier of malaria is Nyssomyzomyia ludlowi, which breeds in, and is confined to the neighbourhood of, salt swamps and brackish water, the species of parasite conveyed being that of malignant tertian fever. The sickness is confined to the neighbourhood of the margin of the harbour, within about half a mile of the sea, or salt swamps. The endemicity in this belt is not high (only one large village showing a spleen-rate over 50 per cent.), and is associated with a moderate prevalence of anopheles. The breeding conditions are favourable, but the small fish Haplochilus is very common and acts as a culicide. Among children the predominating type of fever is simple tertian, among convicts quartan infection. Although the disease is mild in character, there is much "chronic ill-health of an indeterminate kind," probably due to relapses. Malaria constitutes from 50 to 70 per cent. of the hospital admissions, but only from 10 to 14 per cent. of the deaths, though indirectly it probably increases the death-rate—e.g., from pneumonia, dysentery, and phthisis. The general care and medical arrangements of the convicts are excellent, but

a more thorough use of quinine is recommended; also the removal of malarious villages to healthy sites, preferably in the interior, as regards the "self-supporters" and the free population; and, as regards the labouring convicts, the removal of the station of Port Mouat (which is near a very malarious village), and the effective quinine treatment of malaria cases, to cut off the source of infection, are recommended. It is suggested also that improvement might be made in the dietary.

British Plant Galls: a Classified Text-book of Cecidology. By E. W. SWANTON. With a Preface by Sir JONATHAN HUTCHINSON, F.R.S., and 16 coloured plates by MARY K. SPITTAL. London: Methuen and Co., Limited. 1912. Pp. 287. Price 7*s.* 6*d.* net.—The peculiar excrescences which are found on the leaves and branches of many plants, and which have received the name of galls, the oak-apple being a well-known example, must have excited the interest of man from the time when he first began to observe in an intelligent manner; but the true nature of these growths was not known until comparatively recent times, and even now there is much left for close investigation. Owing to their strange appearance and their nature not being understood it is not surprising that their origin should have been ascribed by some writers to spontaneous generation, or that they should have been used as instruments of divination and as charms against disease. This superstitious side of the subject is briefly touched upon by the author in his interesting preliminary remarks, a part of the book which, with Sir Jonathan Hutchinson's warm recommendation of the work, might well be made into a separate brochure for the use of schools and nature-students who cannot afford the more expensive and complete treatise. The gall is not, as was popularly supposed, a structure made entirely by insects, for the gall growth usually necessitates a partnership between animal and vegetable life, the shares taken by the two forces being by no means definitely limited. One of the attractions of the study of galls, as Sir Jonathan Hutchinson points out, is that it brings us face to face with life processes in general and with the varied modes of activity manifested by living material under different conditions. Galls are an epitome of biological facts, and a serious student of them must possess a considerable knowledge of entomology and botany, the influence of the seasons, and the effects of weather. Galls can be the result of the reaction between a vegetable structure and the egg of an insect, or may be caused by the presence of a fungus or another vegetable structure, and the various chapters of the book deal with galls in which hymenoptera, coleoptera, lepidoptera, diptera, homoptera, acari, nematoda (eel worm galls), fungi, and mycetozoa play their respective rôles, the descriptions being illustrated by a number of black-and-white drawings in addition to some good coloured plates. A catalogue is added of over 800 British galls, classified in botanical order, the families of plants being arranged as in Engler's "Die Natürlichen Pflazenfamilien." In the nomenclature of species the "London Catalogue of British Plants," tenth edition, is followed. A bibliography and a good index complete an interesting and industrious manual.

MISCELLANEOUS VOLUMES.

THREE volumes of society Proceedings have reached us which from the value of their contents merit a few words of comment.

The *Proceedings of the International Tuberculosis Conference* at Rome were published in THE LANCET of April 27th and May 4th, 1912. The official *Report* (Berlin–Charlottenburg: International Vereinigung gegen die Tuberkulose. 1912. Pp. 501), under the editorship of Professor Dr. PANNWITZ, has now been issued. The papers are printed in their original language, and are followed by an abstract (or by the author's conclusions, where he formulates them) in the two other official languages.——The thirty-second volume of the *Transactions of the Ophthalmological Society* (Session 1911–12. London: J. and A. Churchill. 1912. Pp. 418. Price 12*s.* 6*d.* net.) fully maintains the high standard of the society's work. It opens with the presidential address on Inoculation Treatment in Diseases of the Eye, by Mr. J. B. Lawford, containing an excellent account of the present status of this mode of treatment. Heredity again holds a prominent position, accounting for six papers, of which three are by Mr. E. Nettleship on Congenital Night-blindness with Myopia, on Colour-blindness, and on Juvenile Cataract, whilst Dr. J. S. Manson deals with Lamellar Cataract and Digital Deformity, Mr. A. A. Bradburne with Ophthalmoplegia, and Mr. C. H. Usher with Colour-blindness. Mr. Nettleship's pedigrees are very striking for the thoroughness with which every member of the family is tracked down and investigated. The great mass of valuable evidence on heredity derived from ophthalmology is largely due to his enthusiasm and the stimulation of his example. Papers on operative treatment always attract considerable attention; they include Conical Cornea, by Mr. Claud Worth; Chronic Glaucoma, by Dr. Arthur B. Zorab; Subconjunctival Reefing and Advancement, by Mr. N. Bishop Harman; and Extraction in the Capsule, by Mr. J. Stroud Hosford. Mr. Harman's operation is ingenious and merits further trial. Mr. Zorab endeavours to obtain a filtering cicatrix by introducing a loop of silk thread into the anterior chamber. The method had been previously tried independently by Mr. S. Mayou. Both surgeons record encouraging results to what must be regarded as a somewhat questionable surgical procedure. Mr. Hosford's operation for extraction of cataract in the capsule will probably not commend itself to the majority. He dislocates the lens by introducing a needle into it and rotating it laterally through about one-eighth of a circle. It seems likely that in many cases this manœuvre would succeed only in tearing the capsule. The many reports on clinical cases and pathological investigations are full of interest for ophthalmologists. There is a large number of excellent illustrations of ophthalmoscopic conditions, microscopical specimens, and so on. The present volume concludes an epoch in the history of the society. Henceforth the meetings will be compressed into a single week once a year. We hope that the change will not detract from the number and value of the communications published in future Transactions.——The *Transactions of the American Otological Society* (Vol. XII., Part III. Published by the Society), containing the papers contributed to the forty-fifth annual meeting of this society held last June at Atlantic City, New Jersey, includes one of much general interest by Dr. S. MacCuen Smith, entitled "Hysteria Simulating Mastoiditis with Suspected Brain Abscess Formation." There was a history of a blow on the right mastoid process received some seven months previously, and during that period the patient had suffered excruciating pain over the right mastoid extending from the occipital to the parietal regions. There were present hemianæsthesia, vertigo, and deafness. A simple mastoid operation was done on the right ear for exploratory purposes. No actual disease was discovered in any part of the cavity. The day after the operation the symptoms completely cleared up. Four months after the operation the improvement was maintained, which showed, as the author states, that they had been wholly deceived by a typical neurasthenic. Although the patient might have recovered under non-surgical psychotherapeutical treatment, as was probably indicated by the

preponderance of subjective and objective symptoms, yet for the reasons above stated they were justified in performing an exploratory operation. An "Alphabetical Index of Otological Bibliography," from June 1st, 1911, to June 1st, 1912, compiled by Dr. E. De Wolfe Wales, is appended, and adds to the utility of the volume for reference purposes.

The desirability of the man in the street becoming acquainted with the principles of first aid in emergencies no longer needs comment. That he is awaking to his responsibility in this matter is evidenced by the great number of books that are published to instruct him therein. *Aids to Memory for "First Aid" Students* (Stockport: Connell and Bailey, Limited; London: The St. John Ambulance Association. Fifth edition. Pp. 48. Price 6*d*. net, by post 7*d*.), by L. M. FRANK CHRISTIAN, M.B., C.M. Edin., is arranged in such a manner as to afford a rapid means of reviewing and testing the student's knowledge.——In *Problems in First Aid* (London: The St. John Ambulance Association. Pp. 175. Price 6*d*. post free), by Dr. L. M. FRANK CHRISTIAN and Mr. WILLIAM R. EDWARDS, a new note is struck. Various examples of emergencies are given to illustrate the mode of elucidating separately the three fundamental problems in rendering first aid—the nature of the emergency, the needs of the case, and the treatment most suited to the attendant circumstances until the arrival of professional help. The book is intended to be a practical companion to the official Manual of First Aid of the St. John Ambulance Association by Mr. Cantlie. It is especially worthy of commendation.——A handy little book of simple and practical remedies and suggestions for use when a medical man cannot be immediately secured, and in cases considered too trivial for professional care, is *A Stitch in Time*, by A ROOSEVELT HOSPITAL GRADUATE NURSE (London and New York: G. P. Putnam's Sons. 1912. Pp. 75. Price 3*s*. 6*d*. net). After dealing with miscellaneous casualties and every-day troubles, we have a chapter on household medical supplies, care of the sick room, bandaging, artificial respiration, &c., and one on poisons and their remedies. There is an appendix of dietetic recipes. The syncopated style of writing, omitting the small connecting words, grates on English ears.——In a *Guide to Promotion for Non-commissioned Officers and Men of the Royal Army Medical Corps*, with appendix on Hints for Young N.C.O.'s. (Third edition. Illustrated. London: Gale and Polden, Limited. 1912. Pp. 434. Price 3*s*. 6*d*. net), Captain S. T. BEGGS, M.D., gives a *précis* of the official text-books and other regulations appertaining to the instruction in drill and other duties necessary for the promotion examinations for non-commissioned officers and men of the Royal Army Medical Corps. The book will be of use to young non-commissioned officers recently promoted, as well as to those of senior rank who for any reason may have lost touch with the interior economy of a company and of their corps. It may also prove useful to commissioned officers of the Royal Army Medical Corps in the junior ranks as a guide to the instruction of corps orderlies. The work has been selected as one of the text-books for the Royal Army Medical Corps schools of instruction for the Territorial Force. It can be recommended also to those concerned with voluntary aid detachments and other first-aid classes.

A few books on travel and languages may be noted here. As a winter health resort Algiers has been steadily growing in favour for some years past. Those who desire to know something of its qualifications in that respect will find much to interest them in *From Cloud to Sunshine, Winter in Algiers* Ninth edition. (London: Baillière, Tindall, and Cox. 1912. Pp. 114. Price 2*s*.), by Dr. ALFRED S. GUBB, in which neighbouring places, modes and cost of transit, antiquities, hygienic precautions, the flora, racial types, and so forth, are also described. The book is profusely illustrated.——Those who are desirous of learning anything about the topography, climate, springs, baths, drink cure, entertainments, and so forth of Bad Kissingen, in Bavaria, will find a considerable amount of useful information compressed into a small space in a paper-covered pamphlet entitled *Bad Kissingen as a Health Resort*, by A. ROSENAU, M.D. Würzburg, L.R.C.P. Lond. (London: Baillière, Tindall, and Cox. 1913. Pp. 31.).——The transition from travel to foreign languages is an easy one. *Marlborough's Travellers' Manual of Conversation*, No. 2 (London: E. Marlborough and Co. Price 1*s*., or cloth 1*s*. 6*d*.), is intended for travellers in Holland and the Rhine, and contains in parallel columns the usual classified subjects of conversation in English, French, German, and Dutch; also a vocabulary. It will doubtless be found as useful as such manuals can be with their serious limitations.——In his preface to *Portuguese Self-Taught* (Thimm's System). With Phonetic Pronunciation. Second edition, revised. (London: E. Marlborough and Co. 1912. Pp. 120. Price, cloth, 2*s*. 6*d*.) the author, Mr. E. DA CUNHA, states that this language has not hitherto been sufficiently studied by the British. This statement was originally made in 1904, and it is no doubt still largely true. There is some explanation for this, however, from the Englishman's point of view. Portuguese is not so easy to pronounce as Spanish, although at first sight it looks simple. For example, "o jardim," ("the garden") seems hard to pronounce as "oo zhurrdeen (g)"; Lisboa (Lisbon) as "Leezhboh'e (r)"; while Londres (London) sounds tricky as "Lohn'drizh." There is not the straightforward pronunciation met with in French, Spanish, Italian, or German. The book, however, makes the matter as plain as possible within its limits and without a teacher.——Mr. C. A. THIMM'S *Norwegian Self-Taught, with Phonetic Pronunciation*. Fifth edition. Revised and enlarged by P. TH. HANSSEN. (London: E. Marlborough and Co. 1912. Pp. 128. Price, cloth, 2*s*. 6*d*.), is an interesting book for those who wish to acquire an idea of the Norwegian tongue, and especially interesting on account of the amusing likenesses of many words to English. The clear account of the pronunciation given takes away many of the fears of the beginner that he will never be able to pronounce the curious combinations of consonants. As a matter of fact many consonants are not sounded. "Hjem" and "hvem" are "yem" and "vem" respectively; and "skjœgget" (the beard) is "shehggert." Here we see a resemblance to "shaggy."——Comparative philology, however, is not only an abstruse science, but it is very remote on the whole from medicine, while the number of medical men for whom it possesses interest as an extra-professional study is undoubtedly very limited. We do not feel justified, therefore, in according the necessary space which a criticism of Dr. RICHARD LOEWE'S *Germanic Philology* (London: George Allen and Co., Limited. 1913. Price 4*s*. 6*d*. net), edited and translated by J. D. JONES, Ph.D. Berlin, B.A. Lond., would require if seriously dealt with. The work will doubtless prove of interest to medical men who are students of philology. The original Indo-Germanic speech is taken as the starting-point, and the different sounds and forms are traced down to the Germanic dialects of historical times.

LITERARY INTELLIGENCE.—Messrs. W. B. Saunders Company announce for immediate publication a new volume of Keen's "Surgery." Recent advances in surgery—both general and special—have been incorporated and the work is fully illustrated. The price is uniform with the five volumes already published.

THE LANCET.

LONDON: SATURDAY, MARCH 22, 1913.

An Austrian View of the Work of the British Royal Commission on Tuberculosis.

THE work of the British Royal Commission on Tuberculosis received a notable eulogy and some critical comment in the pages of *Das Oesterreichische Sanitätswesen*, Nos. 17, 18, and 19, 1912. Our State treatment of tuberculosis is now the subject of such anxious consideration that it is important to see the light in which the views held by the Royal Commission are regarded. Dr. THEODOR ALTSCHUL, of Prague, impressed, as he states, by the very great importance of the matter from both the theoretical and practical aspects, regarded a translation of the final report of the Commission into German as very desirable. He has accordingly rendered the English text, which was published in Professor GOTTHOLD PANWITZ'S periodical *Tuberculosis* in September, 1911, into German as literally as possible, with a few unimportant omissions, and has added an interesting, though brief, commentary with a criticism of the results obtained by the Commission. This opens with the following striking appreciation: "An imposing work, carried out with extraordinary zeal and great technical knowledge, lies completed before us. Never before has a scientific investigation directed to a special problem been undertaken with such a wide range, through such a long period of time, and with such large means as in this case, and probably never will again. From its first to its last sentence the work is of the greatest interest, and contains so many important facts that every medical man should make himself familiar with it." After this full and graceful recognition of the work of the Commission Dr. ALTSCHUL proceeds to point out some of the difficulties of the problems in connexion with the subject of tuberculous disease, and continues: "When, however, this extensive, important, and in every way excellent work is studied impartially and critically examined, it must be admitted, with all due acknowledgment of the splendid organisation, the shrewd methods, the diligence and wide technical knowledge of the Commissioners and their assistants, that a complete solution of the tuberculosis question has, in spite of everything, not yet been achieved, and the Commission itself admits this." He then refers to the work done in Germany upon the relations of the bovine and human forms of tuberculous disease to one another, particularly to the experiments of KOSSEL, WEBER, and HEUSS in *Tuberculosen Arbeiten aus dem Kaiserlichen Gesundheitsamt*, No. 3, 1905. These observers found that in their experiments they did not obtain any change of the human type of bacillus into the bovine type in the bodies of either rabbits, cattle, or goats. They obtained bacilli of the bovine type in swine tuberculosis, and obtained no proof of the infection of swine under natural conditions with bacilli of the human type. They discovered bacilli of the bovine type in only a comparatively small proportion of human cases, and these were almost exclusively in children under the age of 7 years, and with the exception of one case, in which the evidence was inconclusive, they all presented appearances suggesting an alimentary origin of the infection. In a case of intestinal tuberculosis in a woman, aged 30, both types of tubercle bacilli were found in the mesenteric glands, while in a child 5½ years old bacilli of the bovine type were found in the mesenteric glands and others of the human type in the spleen. They concluded also that they could give no support to the theory that the bovine type of bacilli had greater power of producing disease in man than those of the human type, and they could not confirm the view that tubercle bacilli of the bovine type become changed into the human type after long residence in the human body.

Other investigations are quoted by Dr. ALTSCHUL to show that the work of the Commission amply confirmed work done in other countries upon the same lines. He points out that it must now be accepted without doubt that infection with bovine bacilli by way of the alimentary tract in the human subject does occur. He maintains, however, that these cases are exceptional and not the rule, and that no answer has yet been found to the very important questions why this form of infection is not more common in children and what are the external conditions which favour it. He agrees with the recommendation in the British report that in the interests of prophylaxis there must be an increased strictness in the supervision of milk, but he does not accept the conclusion that a considerable proportion of the tuberculous disease in childhood is due to the bovine bacillus which the children have swallowed with their milk, as he thinks that this opinion is based upon too small a number of cases. Nor does he regard it as proved that human and bovine tuberculosis are one and the same disease. He maintains that to establish this thesis it must be proved by a very large number of cases that the two types can by some means or other be rendered equally virulent for man and animals, and that the human type is the one most adapted to man, the bovine type that most adapted to cattle. He urges, further, that to establish this view it should be tried by various means to cultivate a type of the genus tubercle bacillus which is not specially adapted either to man or animals, but produces in both identical morbid changes, even though they be of feeble degree. He admits that in the British report there is much which must assuredly attract considerable attention in regard to this matter, but he avers that it will require another great research before these subtle questions can be decided. He refers to the work of the Commission upon the question of lupus and equine tuberculosis as of great importance, and points out that in this connexion a kind of intermediate stage of the tubercle bacillus was obtained, which should form the starting-point of further methodical investigations. He suggests that by this means we may possibly arrive at a clearer knowledge of the biology of the

tubercle bacillus, and even at a solution of the problem of its possible transformation. As other criticisms of the work of the Commission Dr. ALTSCHUL regards the number of cases of human tuberculosis investigated—viz., 108 with 28 sputum experiments—as too few wherefrom to draw far-reaching conclusions. It may be pointed out in reply to this, that the prolonged and laborious nature of the experiments carried out with each necessarily limited the numbers it was possible to study, and that a full study of a smaller number must certainly be more fruitful than a more superficial examination of larger collections of cases.

Dr. ALTSCHUL'S criticisms practically amount to a strong plea for further investigation of the problems, or for a continuation of the work of the Commission, and we cannot do better than translate his concluding paragraph, in the hope that in its English dress it will make a wide appeal to our readers. "By the extensive researches of the English Commission," he says, "a multitude of valuable details in regard to the tuberculosis question have been brought to light, and that is an achievement of great importance. The Commission has carried out its work with scientific enthusiasm and with admirable diligence and perseverance. Both present and future generations will accord recognition and gratitude to the men who have devoted so much time to the investigation of one of the most important problems relating to the public health, an undeniably great achievement. A rich mine has been opened up to science and knowledge, a mine in which all who desire to work further at this subject must explore, but the whole treasure has not yet been dug out, and further work is necessary. A solid foundation has been laid by the work of the English Commission, upon which, with persistence and confidence, may be raised the proud structure of complete knowledge." The organised fight against tuberculosis is become a part of our national policy. We submit that those who have the spending of the funds now available for research require to receive the careful and learned support which would ensue from a continuance of labours that have already proved fruitful. Whatever course the new expenditure on research may take, it will obviously be valuable to continue the work which led to the Final Report of the British Royal Commission on Tuberculosis, and this is clearly the message of Austrian criticism.

David Livingstone.

SELDOM has a pioneer in geographical discovery and, in its sequela, the reclamation, physical and moral, of the races "brought to light," been so largely and effectively endowed with the qualities requisite to his task as DAVID LIVINGSTONE, the centenary of whose birth the whole civilised world is now commemorating. Of humble origin, though come of a vigorous stock, he was, from his boyhood, inured to self-reliance—in other words, to the development of his innate gifts which, under conditions less restricted, might have dwindled or rusted from lack of stimulus or motive for exertion. He had to earn his livelihood almost concurrently with acquiring the elementary knowledge necessary for a start in life, devoting his spare hours to study, and pursuing it with an ardour enhanced by a sense of the value of time. Natural history had special attractions for him from the first, and, while his interest in geology, botany, zoology, and even astronomy, evoked and quickened his powers of observations, he yet saw and appreciated the value of "humanistic" training, and made himself proficient enough in Latin to acquire the linguistic habit and to make the subsequent mastery of language an easy game. With all this he had the religious instinct strengthened in him by family tradition and inculcation, redeemed, however, from the limitations of puritanism by an unsectarian love of his kind and, be it added, by a developed sense of humour which kept his zeal from degenerating into fanaticism. So qualified, he may be said to have gravitated by an irresistible, compelling force to the career in which he entered, a career in which he found himself at home from the outset, and which at once stimulated and braced the powers and the energies which threw him into it, till lively interest in its prosecution glowed into enthusiasm and became well-nigh an obsession.

The "Dark Continent" appealed powerfully to his imagination, and so alive was he to the complexity of its problems that in choosing the missionary field he qualified himself in every department of knowledge that could contribute to their solution. He studied medicine, as supplying a supreme equipment for the reclamation of the savage races with whom he would have to deal, and from that coign of vantage he proceeded to theology as a further strategic weapon—both studies made exceptionally easy for him by his early love of natural history and by the sternly, if not austerely, religious atmosphere in which he had been brought up. He was, indeed, as his Italian eulogist in the "Bollettino della Società Geografica" for the present month says of him, "A discoverer because he was an apostle, and an apostle because he was a discoverer," both callings reacting on each other and combining in the unique personality which explains at once his success and the admiration in which he is held by the contemporary world. Of his predecessors in the same field, the great Jesuit missionaries of the seventeenth century, none came near him in this *ensemble* of qualities. They were simply agents of the Holy Office and its proselytising propaganda, protagonists in the fight in which the poet-laureate of their order sings—

Loyola Lutheri triumphos
Orbe Novo reparabit ultor.

Self-denying, devoted men they undoubtedly were, aye, even enlightened enough to perceive, partly to utilise, the value of medicine as an auxiliary in their enterprise; but proselytisers first and last, and civilians incidentally rather than of set purpose. But this distinction between them and LIVINGSTONE explains the success of the one and the comparative failure of the other—Spain and Portugal having neither of them made their tropical acquisitions permanent for good, while Great Britain owes to the methods typified by LIVINGSTONE the fact that among all the European forces working in the Dark Continent hers stand out as the most progressive, the most enduring, and, politically speaking, the most conducive to the power and influence of the source from which they emanate.

It is in this point of view that the life and work of LIVINGSTONE appeal most impressively to the outlying world—to that "foreign opinion" which, in the words of Madame DE STAEL, is "that of a contemporaneous posterity." Precisely from among those Powers, France, Germany, and now Italy, in which colonial expansion is most valued and promoted, come the most appreciative, the most enthusiastic, eulogies of the many-sided explorer, apostle, and civiliser, seeing as they do the solid, and in the best sense remunerative, acquisitions made in the Dark Continent on the lines and on the methods which he laid and carried out. Of those eulogies that from the pen of the accomplished nature-student and publicist, Professor ADRIANO AUGUSTO MICHIELI, representing the Italian Geographical Society, is not the least felicitously inspired and morally glowing. Having, for better or worse, acquired a foothold on the Red Sea littoral, in Somaliland on the Indian Ocean, and in the Tripolitania on the Mediterranean, Italy finds it the most urgent of problems to recoup herself for the blood and treasure she has lavished on their conquest, to convert them from being a drain on her resources, and to become an outlet for her rapidly increasing population and a treasure-house of financial development. "Follow in the footsteps of the British explorer, imitate, nay, if possible, improve upon, his methods, assimilate his humanitarian spirit, and so conquering on the lines of 'conciliation' make the intruding, innovating power the 'nursing mother' of progress, prosperity, and peace"—such is the burden of Italian, nay, of European, eulogy on DAVID LIVINGSTONE. And safely may it be said that no consummation could have been more gratifying, more compensating to that great, simple-minded, and modest philanthropist, discoverer, and rehabilitator than the realisation that his achievement in Equatorial Africa had become an inspiration of universal Christendom to "go and do likewise" and to be thrice-blest in the process and its result.

Annotations.

"Ne quid nimis."

TWO SURGICAL "CLUBS" IN LONDON.

IT is a curious fact that the hospital surgeons of London rarely have the opportunity of witnessing the performance of operations by any other surgeons than those of the hospital to which they are themselves attached, and therefore it is not at all improbable that many niceties of method become known to only a small circle. In order to remedy this state of affairs a surgical "club" was started among the members of the surgical staffs of those hospitals in London to which are attached medical schools, and arrangements were made to invite the surgeons of these hospitals to visit in turn the different institutions. A beginning was made in February, when some 30 surgeons visited St. Bartholomew's Hospital, and saw a number of operations performed by various members of the surgical staff. Great interest was shown, and it is clear that the experiment is likely to be a success. This scheme being limited to general hospitals and those possessing medical schools omitted several important hospitals, and amongst these was the Royal Free Hospital, which indeed possesses a medical school, and therefore might reasonably have been included. At a number of the hospitals omitted from the earlier surgical "club" the surgical staffs have decided that the example set them might usefully be followed, and a second surgical "club" has been formed. Among the hospitals comprised in this second scheme are the Royal Free Hospital, the Hospital for Sick Children, Great Ormond-street, the Temperance Hospital, and several others, and a beginning was made last week, when some 16 surgeons assembled at the Royal Free Hospital and witnessed a number of operations performed by the surgical staff. The schemes have proved certainly successful in both instances, and should result in benefit to the surgeons of London.

THE CITY OF MADRAS AND ITS IMMUNITY FROM EPIDEMIC PLAGUE.

THE question has often been asked why during the past 17 years, when plague has been visiting nearly the whole of India, and ravaging in a disastrous manner many thickly populated communities, the disease has never succeeded in gaining a foothold in the city of Madras with its population of over half a million. Notwithstanding repeated importations of the infection there has been no outbreak, with the exception of a comparatively slight epidemic in 1905–06 limited to the fishing population living on the extreme outskirts of the municipal boundary and therefore hardly to be regarded as being within the city itself. Madras is the third city in India in point of population, and as a seaport ranks fifth in importance, having a large trade by shipping with eastern ports, and particularly with Rangoon, where plague is often epidemic, and from which large quantities of rice or other grain are brought, such cargoes attracting rats on board ship at the place of loading. On the landward side Madras is in close communication by rail with other parts of India in which plague is now annually epidemic, including Mysore, and especially the town of Bangalore in that State, where the disease has of late years been very prevalent. But in spite of these and other opportunities for contracting the infection Madras has, with the slight exception mentioned above, remained free from epidemic plague during the past 17 years, and only sporadic cases, spread over that period and resulting in a total of 125 deaths, have been recorded in the city. Yet Bombay and Calcutta have suffered severely year after year, the former, with a population of 979,445, having had no fewer than 178,440 plague deaths, and the latter, with 1,222,313 inhabitants, having had over 61,000 in the period in question. With the purpose of discovering, if possible, the reasons for this apparent immunity of the city of Madras from plague epidemics, the Advisory Committee, appointed jointly by the Secretary of State for India, the Royal Society, and the Lister Institute, some little time ago ordered an inquiry to be made by its expert officers into the matter, and the results of this have recently been published in the "Seventh Report on Plague Investigations in India."[1] This report states that the conditions of house construction in the city of Madras are not unfavourable to the establishment of epidemic plague, and that suitable climatic conditions for this prevail during the winter months. Though neither rats nor rat-fleas are so plentiful as in other places which have been examined by the committee's experts, still there are probably enough of both to maintain plague if it were introduced. Moreover, the local rats (Mus rattus) have been shown by experiment to be exceptionally susceptible to plague infection. It therefore appears that the city

[1] Vide the Journal of Hygiene, Plague Supplement II. The Cambridge University Press. Jan. 13th, 1913. Price 7s. net.

is not immune to the disease in the sense that the prevailing conditions are such that plague could not become established in it. Experience has demonstrated that a plague epidemic is more likely to be started if the infection reaches the place at the time when meteorological conditions are favourable and when rat-fleas are most numerous. In Madras these conditions are most suitable from December to February—that is, at the time when the plague season is established in such towns as Bangalore, from which the disease could easily be brought. It is probable that Madras has escaped the ravages of plague because infection has not been able to reach it at the most appropriate time, or because the infection has encountered some obstacle upon its arrival. The infection of plague is known to travel long distances by means of fleas carried upon the bodies of persons or animals, or wrapped up in bales or bundles of clothing and the like. Meteorological conditions largely affect the duration of the life of the flea apart from its host, a cool atmosphere permitting the insect to live ten times as long as in a hot, dry air. Madras, on the whole, is a hot place, but in the cooler months the temperature would seemingly allow fleas to live for a considerable time, though there is no definitely cold weather to give really favourable conditions for flea importation. How far local efforts and preventive measures, especially the passport system and the associated sanitary administration, have had a share in bringing about the city's immunity from epidemic plague it is not easy at present to say. Probably the passport system in vogue in Madras acts to some extent in deterring sick persons from travelling to the city, and in this way helps in checking the spread of the disease. In view of these results the committee proposes to extend its inquiry so as to include other parts of the Madras Presidency in which the same apparent immunity from epidemic plague has been observed, and as to which we have on several occasions directed attention in the columns of THE LANCET. Further discussion of the questions outlined above has very properly been reserved by the Advisory Committee until the whole problem of plague in the Presidency has been adequately studied in detail by its expert officers.

THE EASTER EGG IN MODERN TERMS.

THE injunction in mediæval times that after a period of partial abstention from food during the Lenten season the egg should form a prominent article of diet on Easter Day proves to be a peculiarly sensible one in the light of modern knowledge in regard to its composition. It is not so very long ago that lecithin, the interesting phosphatised oily substance contained in the yelk, was found to have a decidedly favourable effect upon nutrition. Some authorities have gone so far as to assert that the nerve centres depend upon lecithin for the highest performance of their functions, and that nerve and brain exhaustion is caused by an undue expenditure of lecithin. Lecithin has thus been employed in nervous breakdown of various forms, and the experience is recorded that after a short course of treatment by lecithin the sufferers put on flesh and experience a feeling of well-being. If this is the case, an egg dietary is obviously peculiarly suitable after a *régime* of fasting, when it is remembered that the most fruitful source of lecithin is the ordinary egg. The mono-amino phosphatide (to give its chemical description accurately) is present in the yelk of an egg to the extent of a little over 7 per cent. Taking an average egg to weigh about 50 grammes, of which the yelk is 30 per cent. or 15 grammes, one egg is capable of yielding 1·08 gramme of lecithin, or about 16 grains. In the treatment of nervous disorders the dose of lecithin is from 3 to 5 grains three times daily half an hour before meals, so that the daily maximum intake of prepared lecithin would be 15 grains, which is just a grain short of the lecithin found in a single egg. If lecithin is a real need of the body, the supply, it is obvious, can easily be kept up by the simple custom of taking an average-sized egg at the matutinal meal. The eating of an egg, however, would probably not convey to a public, singularly credulous about drugs, the same assurance as would the taking of a few grains of a special preparation. The truth is that food often contains active therapeutic principles which when isolated count as drugs. Lecithin is certainly not a food, but there can be little doubt that its presence in some foods possesses a singular influence on the growing organism. It is present in a good many food substances, but the egg is richest in this curious material. The reverence for an egg in religious history was no doubt based on its life potentialities. The Easter egg was a dietetic recommendation from probably similar reasoning, and it is interesting to note that, apart from its unquestionably high nutritive properties, the egg contains a substance which modern investigation has indicated is peculiarly adapted for cases of malnutrition.

SPINAL FISTULA DUE TO A STAB IN THE NECK.

IN the *Gazette Médicale de Paris* of Dec. 11th Dr. Hustin, of Brussels, has reported a rare result of a stab—spinal fistula. On Feb. 4th, 1912, a woman was stabbed in the median line of the neck at the level of a horizontal plane passing through the mastoid processes. The wound was about 3 centimetres long and ran obliquely downwards and to the left. As it presented nothing peculiar and there were no nervous symptoms it was simply sutured. Everything went on well for four days, and then she began to complain of pains all over the head and noticed that the dressing was stained with sanguineous serum. On Feb. 9th she was admitted into hospital complaining of violent pains in the head. The upper four-fifths of the wound appeared to be cicatrising, but from the lower fifth there trickled abundantly a rose-coloured fluid. With the head strongly flexed on the chest the fluid ran down to the nose, from which it fell at the rate of 10 drops a minute. Pressure in the neighbourhood of the wound increased the discharge, as if there was a collection of fluid in the subjacent tissues. A probe was introduced into the fistula and passed upwards and to the left for a distance of 10 centimetres until it encountered a hard surface. By radiography it was seen that the extremity of the probe was in a horizontal plane passing between the atlas and axis, in a transverse plane passing through the middle of the axis, and in an antero-posterior plane passing through the atlo-axoid articulation. There were no motor or sensory symptoms. The treatment consisted simply in closing the fistula with silk sutures and applying a compress. The fistula at once began to dry up, and on the 19th had completely closed. The pains in the head disappeared three or four days after the suturing. The case presents several points of interest. It is remarkable that a stab which opened the spinal canal to such an extent as to cause a fistula was not attended by section of any important vessels or nerves. Dr. Hustin does not give the obvious explanation: the wound was situated in the median line. The cerebro-spinal fluid lost daily must have at least amounted to 100 grammes. The only resulting trouble was the headache. On the days following suture of the wound the temperature rose to 100·4° F., which suggested the possibility of infection and consecutive meningitis. However, there was never the slightest redness of the borders of the

wound, and the latter healed by primary union. A rise of temperature after wounds of the cervical spine, operative or traumatic, was first described by Sir Victor Horsley, who attributes it to disturbance of the heat-regulating mechanism in the neighbouring medulla.

CULINARY AND CHEMICAL EXPERIMENTS WITH ALUMINIUM COOKING VESSELS.

A FURTHER practical contribution to the question whether aluminium is a safe material to use in the cooking of food has been made in a paper which has reached us, by Dr. John Glaister, Regius professor of forensic medicine and public health, Glasgow University, and Dr. Andrew Allison, his senior assistant. Their experiments were made on similar lines to those recorded by us in a report upon the subject from THE LANCET Laboratory, which was published in our issue of Jan. 4th this year. Two different sets or series of experiments were made—viz.: *Series A*, dealing with the effects on the metal of cooking of such foods as (*a*) bacon, (*b*) dripping, (*c*) milk, (*d*) oranges and lemons to form marmalade, (*e*) brussels sprouts, and (*f*) tomato sauce, cooked after the manner of the kitchen; and *Series B*, consisting of laboratory experiments with such substances as solution of (*a*) common salt, (*b*) acetic acid, (*c*) sodium bicarbonate, (*d*) of a mixture of common salt, tartaric acid, and citric acid, and, in addition, of (1) distilled water, (2) Loch Katrine (type of a soft, well-oxygenated water), and (3) hard water of 38 parts of total hardness per 100,000 parts from an artesian well. The aluminium vessels used in the group under *Series A* consisted of the following—viz., (1) frying-pan of 9 in., or 23 cm., diameter; (2) lipped milk saucepan of 6 in., or 15·8 cm., diameter, with a capacity of 2 pints; (3) deep stewpan, with lid, of 4 in. depth, 5½ in., or 14 cm., diameter, with a capacity of 2 pints; and (4) pudding bowl of 3 in., or 8·9 cm., diameter, with a capacity of half a pint. In the experiments in *Series A* each food or combination of substances composing a dish was individually cooked as in the kitchen, and the total aluminium quantitatively estimated after each experiment. The results show in the first place that in the cooking experiments there was no aluminium dissolved in the case of (*a*) bacon, (*b*) dripping, or (*c*) milk, but that small amounts were dissolved in the case of (*d*) oranges and lemons for marmalade, (*e*) brussels sprouts, and (*f*) tomato sauce. In the experiments recorded under *Series B* no soluble aluminium was found in the case of (*a*) common salt, (*b*) acetic acid, (*d*) mixture of common salt, tartaric acid, and citric acid, nor in the case of distilled water, soft water, or hard water. There were, however, minute traces of soluble aluminium in the case of (*c*) sodium bicarbonate. The largest amount of aluminium found was in the making of marmalade with oranges and lemons, but, as the authors observe, the amount actually found—viz., 1·018 grains of aluminium hydroxide—if the making of the marmalade had been completed by the proper addition of sugar, would be perfectly harmless even if the entire 2½ lb. of preserve had been eaten at one meal by one person, which, of course, is highly improbable. In the cooking experiments no aluminium chloride was found, and the amount of hydroxide found would, if converted into the chloride in the stomach, still fall far short of the medicinal dose of the salts. In view of the results obtained the authors feel justified, as we did in our own report, in declaring that the ordinary use of aluminium cooking vessels for culinary purposes is not attended by any risk to the health of the consumers of food cooked therein. Referring to the report in THE LANCET, which appeared when their experiments were practically completed, the authors write: "We find ourselves in accord with the conclusions arrived at in that article." We welcome this confirmation, which should dismiss any suspicion that with common precautions aluminium is a source of danger as a material of cooking vessels.

PERSISTENT PRIAPISM IN LEUKÆMIA.

A CURIOUS symptom of leukæmia is persistent priapism from thrombosis of the corpora cavernosa. It may be the first symptom noticed by the patient, but usually it occurs late. In the *Cleveland Medical Journal* for January Dr. H. O. Ruh has reported the following case. A Jewish painter, aged 36 years, was admitted into hospital on June 22nd, 1911, complaining of priapism which had persisted for two days. His illness began three years before with a severe attack of epistaxis and pain in the left side. He consulted a physician, who diagnosed leukæmia. He had been treated at various hospitals by internal medication, intramuscular and hypodermic injections, and exposure to the X rays, but had progressively grown weaker. He suffered from cramp-like pains in the lower limbs and abdomen. The priapism had been attended by marked pain in the penis, radiating into the lower abdomen and testes, and by difficulty in micturition. He was poorly nourished, and the mucous membranes were pale. The pulse was 108 and of low tension. The spleen filled the whole of the left side of the abdomen, reaching well down into the pelvis. The liver was also greatly enlarged, extending from the fourth intercostal space to 10 centimetres below the costal margin. Its edge was firm, smooth, hard, and sensitive to pressure. The penis was in a state of erection. The corpora cavernosa were very firm and hard and the overlying skin was stretched, dark red, and glistening. The slightest pressure on them caused exquisite pain. For a few days after admission he could not micturate and catheterism was necessary. The left side of the penis became softer, while the right side hardened, causing some deviation to the left. The priapism lasted eight weeks. On August 19th it had disappeared, but the corpora cavernosa looked much larger than normal and the penis felt boggy. Blood examination on June 23rd showed erythrocytes 3,160,000, leucocytes 692,000, and hæmoglobin 90 per cent. A differential count gave small mononuclears 4 per cent.; polymorphonuclears, neutrophile 24 per cent., eosinophile 8 per cent., and basophile 1 per cent.; myelocytes, neutrophile 62 per cent., eosinophile 1 per cent. The urine contained a trace of albumin and a few granular casts and leucocytes. The temperature, pulse, and respirations were usually normal. He was discharged on August 17th slightly improved. On Feb. 6th, 1912, he was readmitted complaining of weakness and headache. Since leaving the hospital he had felt weak and suffered from pain in the lumbar region and his appetite had gradually decreased. Two weeks before readmission he began to have attacks of dyspnœa and the abdominal pain recurred in greater intensity. There was no priapism. The penis felt boggy, and the corpora cavernosa were still rather large. The axillary and inguinal glands were somewhat larger. On the chest were large distended veins extending from the axilla to the sixth rib on the right side, and to the eighth on the left. This was considered to be due to myelocytic thrombosis of the deeper veins. On the 7th there was pain on the left side of the scrotum and in both testes. This was due to thrombosis of the pampiniform plexus, which could be felt as a hard bunch of cords. On March 10th an attack of pneumonia of the left lower lobe began. On the 13th the left lower limb was much swollen, and the femoral vein was tender. Evidently it was thrombosed. He recovered from the

pneumonia. In April the left leg became œdematous. The right internal saphenous vein was thrombosed and he died. At the necropsy the spleen reached 12 centimetres below the costal margin and weighed 1352 grammes. It cut with greatly increased resistance. The cut surface was dark red, very smooth, and hard. Here and there were greyish-yellow areas from 1 to 3 centimetres in diameter. The liver weighed 2100 grammes and was pale on section. Many of the veins of the left pampiniform plexus were occluded by brownish laminated thrombi. The femoral veins were occluded by a firm greyish-brown thrombus. The sinuses of the corpora cavernosa of the penis were filled with yellowish material, from which no blood could be expressed. Microscopic examination of the organs showed leukæmic infiltration and an occasional infarct and thrombosed vessels. The thrombi were composed almost entirely of degenerated myelocytes. The marrow of the femur showed the changes typical of myeloid leukæmia. The thrombi in the corpora cavernosa had been replaced by delicate connective tissue fairly rich in capillaries; throughout this were débris of erythrocytes. Thus a secondary circulation was established leading to disappearance of the priapism.

HYPNOTIC DRUGS ON THE POISONS SCHEDULE.

THE Privy Council has signified its approval of the resolution of the council of the Pharmaceutical Society declaring veronal and other synthetic hypnotic drugs [1] to be poisons in the second part of the Schedule of Poisons to the Poisons and Pharmacy Act, 1908. For the first time, therefore, trade names and technical language are introduced into the schedule. In future it will be unlawful for any person, unless he be a duly registered pharmacist, to sell any of these drugs by retail, and the registered seller will be required to label all packages containing the drugs with his name and address and the word "poison." It need hardly be added that when any of these drugs is supplied on the prescription of a medical practitioner no poison label need be attached to the medicine. The desirability of adding these substances to the schedule has frequently been emphasised in THE LANCET and there can be little doubt that the restrictions which are now imposed upon their sale will have the effect of checking to some extent their indiscriminate use.

THE NATURE OF TEA INFUSIONS.

ALTHOUGH a considerable amount of work has been done in regard to the chemistry of tea infusions, there still remain a good many interesting points which merit further investigation. We publish in our present issue a contribution on the subject by Mr. Henry L. Smith, B.Sc., F.I.C., which shows that he has pursued a careful experimental inquiry on lines more or less suggested in two articles from our laboratory department which were published in THE LANCET of Jan. 7th and Dec. 2nd, 1911. In these articles it was concluded that for the most part the caffeine present in tea was present as a definite compound of caffeine and tannin, caffeine tannate. In the infusions of certain teas there is sometimes uncombined tannin present, while in others there is more caffeine present than can be combined with tannin, assuming that caffeine tannate is composed of 1 part by weight of caffeine to 3 parts by weight of tannin. It was also shown that, when the ratio 1:3 existed in the five minutes' infusion, the tea giving such a result was invariably regarded by the taster as a tea of superior quality. The ratios found by Mr. Smith, though in some cases approaching these figures, show decided variations from the relation pointed out, but of course this does not necessarily mean that for the most part caffeine is not present as caffeine tannate. His results would have been still more suggestive if he had recorded the taster's opinion of the teas employed in his experiments, for in some way the experts' opinion of the quality of tea is related to the ratio of caffeine to tannin. Mr. Smith's ratios are, however, not strictly comparable with our own, since he adopted different methods of analysis and his infusions were stronger. The subject is made difficult by the complexity of that remarkable group of bodies, the tannins, and the uncertainty of their composition. His conclusion that neither all the caffeine nor all the tannin is precipitated from certain teas by ammonium sulphate, however, is one with which we may entirely agree. But the important point is that caffeine tannate *is* entirely precipitated by ammonium sulphate while tannin is soluble in a saturated solution of this salt. This is easily proved by operations upon caffeine tannate artificially prepared in the laboratory. It is a significant fact that ordinary cold water only extracts a very small proportion of the total caffeine in tea, and what is extracted occurs with a complement of tannin, and yet the solubility of free caffeine is about 1·35 per cent. at 16° C.

[1] THE LANCET, March 15th, 1913, p. 769.

THE DIAGNOSIS OF TERTIARY SYPHILIS OF THE LIVER.

THE diagnosis of tertiary syphilis of the liver is so important that it may determine the issue between life and death. The diagnosis may be very difficult to make. In the *American Journal of the Medical Sciences* Professor Thomas McCrae has published a valuable paper based on 56 cases of tertiary syphilis of the liver observed in the medical service of the Johns Hopkins University among 27,500 medical cases (early congenital syphilis is not included). In 46 out of 3300 necropsies well-marked syphilis of the liver was found, but in many there had been no clinical manifestations of the disease. Alcohol appeared to be a factor in determining syphilitic disease of the liver, for in only 4 of the cases in which there was a definite note as to alcohol was there no history of drinking. The symptoms varied very much. The conditions of which the patients complained were as follows: swelling of the abdomen (27 cases); pain in the upper abdomen (18 cases); jaundice (7 cases); dyspnœa (5 cases); loss of weight and strength (3 cases); vomiting (2 cases); fever (2 cases); chills and fever (3 cases). On examination a striking feature was emaciation, which was marked in 29 cases. Jaundice was present in 23 and varied from slight to severe. The rapidity with which it disappeared under treatment was striking. There was some pyrexia in all but 7 cases. This is an important point, as the persistence of fever has led to the diagnosis of tuberculosis. In about two-thirds of the cases the temperature was constantly elevated. In the majority it did not exceed 101° F., but in some it was steadily between 101° and 102°. In other cases the temperature was not constantly elevated, but rose each day. In some cases the elevations were accompanied by chills. The influence of potassium iodide on the fever was marked. Ascites was present in 23 cases and usually was large in amount. It rapidly yielded to specific treatment, and tapping was necessary only in 11 cases. The spleen was palpable in 24 cases; it was always hard and firm. The condition of the liver must be considered under two heads: 1. Late congenital syphilis. Of this there were three cases at the ages of 2, 12, and 16 years respectively. The liver was much enlarged, and large, rounded, smooth swellings were felt in the epigastrium. 2. Acquired syphilis, of which there were 53 cases. In 49 the liver was enlarged or showed a tumour. In 23 the left lobe was much more involved than the right—an important point in diagnosis. The changes in the liver may be thus classified: (*a*)

General enlargement, but no marked irregularity of surface (20 cases); (*b*) definite nodules (20 cases); and (*c*) a marked prominence, which might be described as a boss, sometimes associated with nodules (9 cases). The diagnosis may be obscured in three ways. 1. Another condition, such as cardiac disease, may seem to account for the symptoms, or the ascites may prevent recognition of the hepatic enlargement. 2. The disease of the liver may be recognised, but not its nature. 3. Some other abdominal condition, such as tuberculous peritonitis, may be diagnosed. In the cases of general enlargement of the liver the diagnosis from ordinary cirrhosis is difficult, especially as there is often a history of alcoholism. A careful examination should be made for nodular enlargement, especially after tapping, if there is ascites. In doubtful cases the Wassermann reaction and the effect of specific treatment are important aids. In the cases of definite nodules the diagnosis from malignant disease may be difficult. Here, again, the effect of specific treatment may solve the difficulty. Its effect both on the fever and the condition of the liver is usually striking. The temperature falls to normal in within 48 hours, and the liver as a whole, as well as the prominences on it, may markedly decrease in size in two or three weeks. In some case the spleen also rapidly decreases in size. Other signs of syphilis may suggest the diagnosis. The presence of unexplained fever with hepatic symptoms should suggest syphilis, and a Wassermann test should be performed. The treatment of hepatic syphilis is that of syphilis in general with special emphasis on iodide of potassium. In many of the cases this alone gave a perfect result. No difference could be observed when mercury was given, but it seems wise to give both drugs. In two cases salvarsan was given and improvement followed, but it was not so rapid as it was under iodide.

PERSONAL EXPERIENCE OF GLAUCOMA BY A MEDICAL MAN.[1]

THE personal experiences of medical men suffering from some obscure disease are always interesting and generally instructive. The scientific training of the patients adds to the value of their observations, for they know what to expect and are able to analyse their sensations. The advantage, however, is heavily counterweighted by the absence of that detachment of mind which is essential for the proper appreciation and valuation of pathological signs and symptoms. We have already had a minutely detailed account of the case of a distinguished ophthalmologist who suffered from a very severe and progressive form of glaucoma. The late Professor Javal's account of his own case exemplified both the features referred to above. We have now another example in the case of Dr. W. Wagner, a medical man apparently not specially engaged in the practice of ophthalmology. In 1877, when he was 41 years of age, he had an attack of glaucoma in his left eye, and iridectomy was performed in 1878. He has from time to time published accounts of the symptoms and progress of the disease and now sums up his experiences in a short monograph. The visual acuity of the eye remained excellent until 1891, though it is interesting to note that there was always some deficiency in adaptation to varying intensities of light. Vision remained good till 1903, when he suddenly noticed a central absolute scotoma in the affected eye. It was unaccompanied by glaucomatous symptoms, and in the discussion of the case it is probably rightly referred to an intercurrent retrobulbar neuritis. Not until 1909, after an attack of pulmonary inflammation, did the tension of the eye become seriously raised. Since then the eye has been blind. In 1911 Professor Stock of Jena measured the tension with a Schiötz tonometer and found the intraocular pressure to exceed 100 mm. of mercury. Ophthalmologists will read this very exhaustive criticisms of personal symptoms and the estimates of their value with considerable interest, and if Dr. Wagner has not added any very striking fact to our knowledge of glaucoma he has at least fulfilled a duty in placing his experiences on record.

[1] Wagner: Ein weiterer Beitrag zur Glaucom-Frage. Berlin: Karger. 1912. Pp. 45. Price 1 M. 50 Pf.

PARA-MELITENSIS FEVER.

To the long list of diseases which afflict man, and which are due to specific micro-organisms, there has been recently added yet another under the name of para-melitensis fever. This newly recognised malady possesses all the clinical features of ordinary undulant or Mediterranean fever, but is caused by an organism which differs from the micrococcus melitensis in certain definite particulars, especially in its agglutinating reactions, though the cultural and morphological characters appear to be similar. The investigations of Nègre and Raymond have demonstrated that this microbe is a distinct variety of M. melitensis, and these observers have given it the name of M. para-melitensis. The first recognised instance of the new illness in this country has been recently reported in the *Journal of Tropical Medicine and Hygiene*, by Fleet-Surgeon P. W. Bassett-Smith, of the Royal Naval College, Greenwich. The patient contracted his infection in the south of France, and the illness, which followed an irregular course, has had a duration of two years or more. The case was diagnosed as one of undulant fever, and this view was supported by several experts of eminence. But the diagnosis could not be confirmed either by culture of the micro-organisms from the blood or urine, by agglutination reaction, or by the complement fixation method. On the other hand, and notwithstanding the persistent absence of any reaction with micrococcus melitensis, there was a positive reaction with the para-melitensis organism even in high dilutions. The malady appeared to be little benefited by routine treatment. A vaccine was prepared, however, from M. para-melitensis for the treatment of the patient, and Fleet-Surgeon Bassett-Smith reports that it is being used at present with apparent benefit, although it is admitted that it is perhaps too early to pronounce definitely as to its efficacy as yet.

ON account of the increase of work entailed upon the Local Government Board for Scotland by the Insurance Act the Treasury have sanctioned the appointment of an additional medical inspector (salary £500 rising to £800). The new officer will be required to have special experience in tuberculosis, but must also have a general experience of public health work. We understand that the Board are in course of considering applications for the appointment.

A WELL-WRITTEN, ample, and discriminating "In Memoriam" notice of the late Dr. F. W. Pavy, by Dr. Frederick Taylor, has been reprinted from Guy's Hospital Reports. It adds a great deal from personal appreciation of the man to the main facts of his life which were recorded in our columns at the time of his death, and details at some length the main features of his professional work.

THE Home Secretary has appointed an Advisory Committee to assist him in the administration of the Cruelty to Animals Act, 1876. The members of the committee, who have been selected from names submitted by the Royal Society, the Royal College of Physicians of London, and the Royal College of Surgeons of England, are: Lord Moulton, Sir

Anthony Bowlby, Sir J. Rose Bradford, Sir H. Bryan Donkin, Mr. G. H. Makins, Dr. Seymour J. Sharkey, and Mr. Charters J. Symonds. This Advisory Committee is appointed in accordance with the recommendation of the Royal Commission on Vivisection.

AT a Comitia held on Monday last Sir Thomas Barlow was re-elected President of the Royal College of Physicians of London.

Dr. Philip Frank, who died on Monday last at his London residence, at the age of 82, was for very many years a well-known consultant physician both in London and at Cannes.

THE NATURE OF TEA INFUSIONS.

BY HENRY L. SMITH, B.Sc., F.I.C.

IN January and December of 1911 two papers appeared in THE LANCET on this subject.[1] These papers explained that in the course of an investigation into the nature of tea infusions precipitates were obtained by (*a*) adding acid and (*b*) saturating with ammonium sulphate. On analysis of these precipitates very constant ratios of caffeine to tannin 1:3 were obtained. Caffeine has formula $C_8H_{10}N_4O_2 = 194$; the tannin is supposed to be identical with quercitannic acid, the formula adopted being $C_{25}H_{20}O_{13} = 602$. If the precipitate contains caffeine and tannin in equimolecular proportions the ratio would be therefore practically 1:3. However, the formula given in the latest edition of Allen's "Commercial Organic Analysis" is $C_{13}H_{16}O_{10} = 404$, while Etti gives $C_{17}H_{16}O_9 = 368$, which would give ratios a little over or under 1:2. The reports in THE LANCET state that tea infusions are essentially solutions of caffeine tannate in an alkaline medium, that they are always alkaline, and that good teas do not precipitate gelatin, as the caffeine is combined with the tannin, and unless there is excess of tannin present it has no coagulating power on proteins. This work and the conclusions drawn seemed of sufficient interest for further investigation.

In investigating a number of teas I have found every tea infusion to give an acid reaction with litmus paper, unless the water used was distinctly alkaline. Also unless sodium carbonate or other alkali be present, all tea infusions examined precipitated gelatin. Even a water containing calcium bicarbonate and alkaline to methyl orange made an infusion that precipitated gelatin. If a little infusion be added to a large excess of gelatin, the precipitate is not evident at first owing to the viscosity of the gelatin, but in presence of a small amount of gelatin the precipitate was formed.

It is well known that caffeine citrate is hydrolysed in aqueous solution, the alkaloid and citric acid being in the free state. The same might be expected of caffeine tannate. This is shown to be so by the following experiment. 100 c.c. of tea infusion containing 0·054 gramme caffeine was extracted with chloroform. On evaporating the chloroform 0·067 gramme of impure caffeine was obtained. On purifying this by means of lead acetate, followed by sodium phosphate to remove excess of lead, and extracting with chloroform 0·052 gramme caffeine was obtained.

A hot tea infusion is clear; on cooling most become turbid. On extracting the turbid solution with chloroform all the caffeine is obtained, and the residual liquid becomes practically clear. The turbid solution deposits a little precipitate on long standing, and more may be obtained on long centrifugalisation. This precipitate contains both caffeine and tannin, but insufficient was obtained for quantitative examination. Some precipitates were obtained in the manner described in THE LANCET report of 1911 and analysed. The method of estimating the tannin described is open to criticism, as it depends on the assumption that the alcohol and benzene dissolve nothing but caffeine and tannin, the residue after removal of caffeine being taken as tannin.

In the following experiments Procter's modification of the permanganate method was used. The precipitate was dissolved in alcohol, added to water, boiled to remove alcohol, and made up to a definite volume. On cooling this was usually turbid. It was shaken up, an aliquot portion added to a little dilute sodium carbonate, and this at once added to the acid indigo solution and titrated. Another aliquot portion was detannated by gelatin in the usual way and filtered. A portion containing the same amount of the original solution was again titrated, the difference in the titrations giving the permanganate equivalent to the tannin. The tannin was calculated as quercitannic acid, the reducing power of which is practically identical with oxalic acid. Three teas were used:—

1. Ceylon containing caffeine,	3·18%	... Tannin,	14·10%	... 1:4·43 ratio.
2. Indian ,, ,,	3·86%	... ,,	14·35%	... 1:3·71 ,,
3. Assam ,, ,,	3·08%	... ,,	13·73%	... 1:4·45 ,,

The infusions were of 5 grammes in 250 c.c. for 5 minutes.

Results.

A. Precipitated with dilute sulphuric acid and ammonium sulphate.

	Caffeine in ppt.	Tannin.	Ratio.
Ceylon	0·1125 grm.	0·316 grm.	1:2·75
Indian	0·0975 ,, ...	0·263 ,,	1:2·70

B. Precipitated with dilute sulphuric acid.

Ceylon	0·050 grm.	0·269 grm.	1:5·38
Indian	0·028 ,, ...	0·151 ,, ...	1:5·39
Assam	0·073 ,, ...	0·325 ,, ...	1:4·45

The filtrates from these were saturated with ammonium sulphate and a further precipitate obtained. The precipitates contained:—

Ceylon ...	0·065 grm. caffeine	...	0·1977 grm. tannin	...	1:2·72 ratio.
Indian ...	0·063 ,, ,,	...	0·187 ,, ,,	...	1:2·97 ,,
Assam ...	0·096 ,, ,,	...	0·188 ,, ,,	...	1:1·98 ,,

In 100 c.c. of the filtrate from these was found:—

Ceylon ...	0·039 grm. caffeine	...	0·076 grm. tannin.	...	1:2·62 ratio.
Indian ...	0·025 ,, ,,	...	0·071 ,, ,,	...	1:2·84 ,,

From these results it is evident that the precipitates do not indicate the nature of the association of caffeine and tannin in the infusion. Saturation with ammonium sulphate precipitates caffeine from its pure aqueous solution. In the hot tea infusion it may be concluded that caffeine and tannin occur considerably hydrolysed and in the free state. On cooling a little substance is precipitated containing caffeine and tannin closely associated.

On adding acid it is well known that anhydrides of the tannin are formed which are insoluble in water. Tannin precipitates many alkaloids, but does not completely precipitate caffeine. Some of the precipitate was dried *in vacuo* over strong sulphuric acid. It contained 14·1 per cent. caffeine and 36·9 per cent. tannin. On shaking up with water and chloroform all the caffeine was obtained in the chloroformic extract. On treating the dried precipitate with dry chloroform 0·91 to 0·98 per cent. caffeine only was obtained. The dried powder must, therefore, contain the caffeine closely associated or combined with tannin. It does not appear to be a pure substance. Ethyl acetate dissolves out a reddish-brown, non-crystalline substance. Alcohol dissolves most of the residue and yields on evaporation a dark brown, non-crystalline residue. Both contained caffeine and tannin. Whatever combination takes place between the caffeine and tannin in these precipitates they do not appear to be a pure or definite caffeine tannate; they vary with the tea and the method of precipitation.

The ratios given are not necessarily comparable with those given in the papers of 1911, the method of analysis being different. However, they are comparable among themselves, and show that the substance precipitated varies in composition and that neither all the caffeine nor all the tannin is precipitated from tea by ammonium sulphate.

While the nature and molecular formula of the tannin of tea is so uncertain, it is premature to form any definite conclusions as to the nature of these precipitates. Further work is being done which, it is hoped, will help to solve the question.

[1] THE LANCET, Jan. 7th (p. 46) and Dec. 2nd (p. 1573), 1911.

MEDICINE AND THE LAW.

Unsuccessful Action against a Surgeon.

AT the Birmingham assizes last week a case was heard in which a man and his wife sued Mr. Charles A. Leedham Green to recover damages for personal negligence. The plaintiffs' case was that in November, 1911, the wife, the patient, had a wart on the left thumb. After consultation with her medical adviser she went into a nursing home, where defendant removed the wart. Subsequently she experienced great pain in the thumb, which became gangrenous and had to be amputated. The accident, it was alleged, was due to the driving of the blood from the arm by bandages and the excessive administration of a freezing mixture. Mr. Leedham-Green denied that rubber bandages were applied to the patient's arm, and said that the freezing mixture was applied only for a few seconds in order to deaden the pain which would be caused by the prick of the needle in applying the anæsthetic. He had found later that the patient suffered from a bad circulation in the extremities. The matron at the nursing home, who was present at the operation, said it was untrue the spray of freezing mixture was continued for more than 25 seconds. After hearing medical evidence the jury found there was no negligence on the part of defendant, for whom judgment was entered, with costs. The case was conducted for the defendant by Messrs. Hempsons, as solicitors to the Medical Defence Union.

Latham v. *Stevens.*

An action was brought in the High Court of Justice (Chancery Division) last week by Dr. Arthur Latham against Mr. Charles H. Stevens and C. H. Stevens and Co., Limited, which had certain points of medical interest. Dr. Latham moved for an interlocutory injunction restraining the defendants from publishing, printing, circulating, divulging, or parting with, otherwise than to the plaintiff or by deposit in court, and from allowing to be printed, circulated, or published a document or certificate, dated Jan. 1st, 1912, relating to one A. G. Hodgson, and signed by the plaintiff, or the effect thereof, or copies thereof or extracts therefrom, and from representing, either by advertisement or otherwise, that the plaintiff had given any certificate in relation to or expressed approval of an alleged cure for consumption, the property of the defendants or one of them. Dr. Latham's case was that the certificate had been obtained by a fraudulent trick, and later had been inserted in certain papers in advertisements relating to Mr. Stevens's alleged consumption cure. An affidavit was read for the defendants stating that none of the advertisements suggested that Dr. Latham had certified that the restoration to health of Hodgson had been effected by the use of Stevens's cure, and the defendants submitted to what was asked for in the notice of motion. Mr. Justice Sargant said the defendants had very wisely submitted to the injunction, to treat the motion as the trial of the action, and to pay the costs. The case was conducted for Dr. Latham by the Medical Defence Union.

QUEEN'S HOSPITAL, BIRMINGHAM.—At the annual general meeting of this institution, which was held under the presidency of the Lord Mayor of Birmingham, Lieutenant-Colonel Martineau, at the Nurses' Home at the hospital on March 19th, the annual report for 1912 which was submitted showed that no great change had occurred in the financial position during the year. The balance of expenditure over income was £5002, as compared with £5016 in 1911. The income was £11,868 and the expenditure £16,870. The number of in-patients treated was 3095 and the number of out-patients 36,217. The report drew attention to the admirable work done by the Queen's Hospital Aid Society in the distribution of sanatorium notes, clothing, and other useful articles among the necessitous patients. The statement of accounts of this auxiliary of the hospital showed that the annual subscriptions amounted to £100 16*s.*, the donations to £6 8*s* 6*d.*, and contributions by patients and their friends to £3 18*s.* The expenditure was £119 4*s.* 1*d.*

VITAL STATISTICS.

VITAL STATISTICS OF LONDON DURING FEBRUARY, 1913.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of the ten diseases specified in the table was equal to an annual rate of 4·8 per 1000 of the population, estimated at 4,518,191 persons in the middle of the year; in the three preceding months the rates were 6·4, 5·5, and 5·3 per 1000 respectively. The lowest rates last month were recorded in Kensington, Chelsea, Stoke Newington, the City of London, and Shoreditch; and the highest rates in Bermondsey, Battersea, Deptford, Greenwich, Lewisham, and Woolwich. The prevalence of scarlet fever again showed a decline last month; among the several boroughs this disease was proportionally most prevalent in Bermondsey, Battersea, Wandsworth, Deptford, and Woolwich. The Metropolitan Asylums Hospitals contained 1639 scarlet fever patients at the end of last month, against 2250, 2088, and 1717 at the end of the three preceding months; the weekly admissions averaged 189 last month, against 282, 226, and 196 in the three preceding months. The prevalence of diphtheria showed but little variation from that recorded in the previous month; the greatest proportional prevalence was recorded in Hampstead, St. Pancras, Holborn, Bermondsey, Greenwich, Lewisham, and Woolwich. The number of diphtheria patients under treatment in the Metropolitan Asylums Hospitals at the end of the month was 913, against 917, 959, and 925 at the end of the three preceding months; the weekly admissions averaged 118, against 124, 120, and 122 in the three preceding months. The prevalence of enteric fever showed a marked decline last month; among the several boroughs this disease was proportionally most prevalent in Fulham, Bethnal Green, Poplar, Bermondsey, Lambeth, and Deptford. There were 44 enteric fever patients under treatment in the Metropolitan Asylums Hospitals at the end of last month, against 37 at the end of each of the two preceding months; the weekly admissions averaged 6, against 7 in each of the two preceding months. Erysipelas was proportionally most prevalent in Fulham, Stoke Newington, Finsbury, Bethnal Green, Southwark, Battersea, and Greenwich. The 20 cases of puerperal fever notified during the month included 7 in Lambeth, 2 in Stepney, and 2 in Camberwell. The 10 cases of cerebro-spinal meningitis included 3 in Wandsworth, and 2 each in Islington, Hackney, and Southwark; and the 2 cases of poliomyelitis belonged respectively to the City of Westminster and Hampstead.

The mortality statistics in the table relate to the deaths of persons actually belonging to the several boroughs, the deaths occurring in institutions having been distributed among the several boroughs in which the deceased persons had previously resided; the death-rates from all causes are further corrected for variations in the sex- and age-constitution of the populations of the several boroughs. During the four weeks ending March 1st the deaths of 6276 London residents were registered, equal to an annual rate of 19·0 per 1000; in the three preceding months the rates had been 15·5, 12·5, and 17·8 per 1000 respectively. The death-rates last month ranged from 13·1 in Lewisham, 14·7 in Hampstead, 15·1 in Deptford, 15·4 in Wandsworth, and 15·9 in Woolwich, to 22·2 in Southwark, 22·3 in Bermondsey, 22·7 in Kensington, 22·8 in Finsbury, 23·0 in Poplar, 25·5 in Shoreditch, and 26·4 in the City of London. The 6276 deaths from all causes included 517 which were referred to the principal infectious diseases; of these, 255 resulted from measles, 20 from scarlet fever, 37 from diphtheria, 102 from whooping-cough, 9 from enteric fever, and 94 from diarrhœa and enteritis among children under two years of age. No death from any of these diseases was recorded last month in the City of London; among the metropolitan boroughs they caused the lowest rates in the City of Westminster, Stoke Newington, Holborn, Camberwell, Greenwich, Lewisham, and Woolwich; and the highest rates in Kensington, Hammersmith, Shoreditch, Bermondsey, and Battersea. The 255 deaths from

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING FEBRUARY, 1913.

(Specially compiled for THE LANCET.)

CITIES AND BOROUGHS.	Estimated population in the middle of 1913.	NOTIFIED CASES OF INFECTIOUS DISEASE.												DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.										
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cerebro-spinal meningitis.	Poliomyelitis.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Enteric fever.	Diarrhœa and enteritis (under 2 years).	Total.	Annual rate per 1000 persons living.	Deaths from all causes.	Death-rate per 1000 living.†
LONDON...	4,518,191	—	810	522	—	38	3	20	267	10	2	1672	4·8	—	255	20	37	102	9	94	517	1·5	6276	19·0
West Districts.																								
Paddington	142,210	—	16	13	—	1	—	—	9	—	—	39	3·6	—	9	—	1	7	—	3	20	1·8	201	19·6
Kensington	171,284	—	27	7	—	1	—	1	5	—	—	41	3·1	—	23	—	—	13	1	4	41	3·1	277	22·7
Hammersmith	123,745	—	13	16	—	1	—	—	5	—	—	35	3·7	—	20	1	1	11	—	8	41	4·3	186	20·4
Fulham	157,117	—	28	16	—	4	—	—	13	—	—	61	5·1	—	11	—	1	1	1	2	16	1·3	198	17·2
Chelsea	64,598	—	4	2	—	—	—	—	2	—	—	8	1·6	—	4	—	—	—	—	3	7	1·4	97	20·3
City of Westminster	154,810	—	24	11	—	—	—	—	3	—	1	39	3·3	—	3	—	—	1	—	5	9	0·8	196	18·5
North Districts.																								
St. Marylebone	114,532	—	23	9	—	—	—	—	4	—	—	36	4·1	—	4	3	1	—	1	4	13	1·5	175	21·2
Hampstead	86,346	—	12	15	—	—	—	—	4	—	1	32	4·8	—	7	—	—	1	—	1	9	1·4	86	14·7
St. Pancras	214,330	—	39	38	—	1	—	—	12	—	—	90	5·5	—	10	1	2	6	1	6	26	1·6	314	20·0
Islington	325,585	—	34	26	—	3	—	1	15	2	—	81	3·2	—	18	3	4	6	1	10	42	1·7	458	19·0
Stoke Newington	50,518	—	1	5	—	1	—	—	5	—	—	12	3·1	—	1	—	—	—	—	—	1	0·3	64	17·2
Hackney	223,353	—	25	24	—	1	—	—	7	2	—	59	3·4	—	19	—	—	4	—	3	26	1·5	313	19·1
Central Districts.																								
Holborn	46,949	—	1	10	—	—	—	—	1	—	—	12	3·3	—	1	—	—	1	—	—	2	0·6	59	17·7
Finsbury	84,679	—	11	8	—	—	—	—	9	—	—	28	4·3	—	6	—	1	2	—	2	11	1·7	143	22·8
City of London	17,916	—	1	2	—	—	—	—	—	—	—	3	2·2	—	—	—	—	—	—	—	—	—	33	26·4
East Districts.																								
Shoreditch	109,654	—	11	7	—	—	—	—	2	—	—	20	2·4	—	10	—	—	3	—	4	17	2·0	204	25·5
Bethnal Green	127,824	—	18	14	—	3	—	—	17	—	—	52	5·3	—	10	1	1	4	—	1	17	1·7	184	19·0
Stepney	275,300	—	53	29	—	1	—	2	14	—	—	99	4·7	—	8	1	2	3	—	9	23	1·1	399	19·8
Poplar	160,913	—	34	21	—	4	—	1	9	—	—	69	5·6	—	6	1	1	1	—	7	16	1·3	275	23·0
South Districts.																								
Southwark	188,487	—	27	18	—	2	—	1	24	2	—	74	5·1	—	10	—	—	5	1	4	20	1·4	307	22·2
Bermondsey	124,739	—	32	21	—	2	—	1	9	—	—	65	6·8	—	10	—	2	5	—	2	19	2·0	209	22·3
Lambeth	297,139	—	58	27	—	5	—	7	12	—	—	109	4·8	—	11	4	3	4	—	4	26	1·1	385	17·4
Battersea	167,464	—	73	20	—	1	2	1	14	1	—	112	8·7	—	20	1	2	4	—	4	31	2·4	236	19·7
Wandsworth	330,395	—	72	43	—	2	1	1	24	3	—	146	5·8	—	28	2	4	2	—	5	41	1·6	371	15·4
Camberwell	261,805	—	53	21	—	1	—	2	17	—	—	94	4·7	—	2	—	6	5	2	2	17	0·8	355	18·4
Deptford	109,280	—	39	15	—	2	—	—	5	—	—	61	7·3	—	—	1	1	9	—	—	11	1·3	121	15·1
Greenwich	95,982	—	19	28	—	—	—	1	9	—	—	57	7·7	—	2	—	1	3	—	—	6	0·8	127	17·6
Lewisham...	168,822	—	33	34	—	1	—	—	11	—	—	79	6·1	—	2	—	3	1	1	1	8	0·6	163	13·1
Woolwich	122,382	—	29	22	—	1	—	1	6	—	—	59	6·3	—	—	1	—	—	—	—	1	0·1	140	15·9
Port of London	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

*Including membranous croup. † The death-rates are corrected for variations in sex- and age-constitution of the populations of the several boroughs, the population of England and Wales being taken as the standard.

measles were 48 in excess of the corrected average number for the corresponding period of the five preceding years; this disease was proportionally most fatal in Kensington, Hammersmith, Hampstead, Hackney, Shoreditch, Battersea, and Wandsworth. The 20 fatal cases of scarlet fever were 5 fewer than the corrected average number; of these 20 cases 4 belonged to Lambeth, 3 to St. Marylebone, 3 to Islington, and 2 to Wandsworth. The 37 deaths from diphtheria were 13 below the corrected average number; the greatest proportional mortality from this disease occurred in Islington, Bermondsey, Battersea, Wandsworth, Camberwell, and Lewisham. The 102 fatal cases of whooping-cough were 35 below the corrected average number; this disease was proportionally most fatal in Paddington, Kensington, Hammersmith, Bermondsey, and Deptford. The 9 deaths referred to enteric fever were equal to the corrected average number, and included 2 in Camberwell. The mortality from diarrhœa and enteritis among children under two years of age was proportionally greatest in Hammersmith, Chelsea, the City of Westminster, St. Marylebone, Islington, Shoreditch, Stepney, and Poplar. In conclusion, it may be stated that the aggregate mortality in London during February from the principal infectious diseases, excluding diarrhœa, was 1·2 per cent. below the average.

*Including membranous croup. † The death-rates are corrected for variations in sex- and age-construction of the population being taken as the standard.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointment has been announced:—Staff-Surgeon: J. Macdonald to the *Venerable*.

ROYAL ARMY MEDICAL CORPS.

Colonel R. H. Firth, late sanitary specialist, Medical Branch, Army Headquarters, India, has taken up the appointment of Assistant Director of Medical Services to the First Peshawar Division of the Northern Army in India, on permanent transfer, in succession to Colonel S. C. B. Robinson, placed on the retired list.

Lieutenant-Colonel A. Kennedy, in charge of the Observation Block, Royal Victoria Hospital at Netley, has been selected for the advanced rate of pay under Article 317 of the Royal Warrant for promotion. Lieutenant-Colonel A. W. Bewley has arrived home for duty, tour expired, from India. Lieutenant-Colonel J. Ritchie has been selected for appointment to command the Station Hospital at Sabathu. Lieutenant-Colonel H. N. Thompson, D.S.O., Honorary Surgeon to H.E. the Viceroy and Governor-General of the East Indies, has been granted eight months' leave of absence home from India from March 19th. Lieutenant-Colonel H. I. Pocock has been transferred from Murree Cantonment to Campbellpore and appointed to command the Military Hospital. Lieutenant-Colonel B. Forde has taken over charge of the Military Hospital at Bulford Camp. Lieutenant-Colonel F. W. Hardy has been selected for appointment to command the Military Hospital at Allahabad Cantonment.

INDIAN MEDICAL SERVICE.

The King has approved of the promotion of the following officers of the Indian Medical Service:—Majors to be Lieutenant-Colonels (dated Jan. 30th, 1913): Charles Milne, Vivian Godfrey Drake-Brockman, William Young, John Joseph Bourke, Bernard Robert Chatterton, Cedric Barkley Prall, Charles Edward Williams, John Norman Macleod, C.I.E., Walter Holland Ogilvie, Richard Heard, Edgar Rowe Parry, Paxton St. Clair More, George Bidie, Cecil Robert Stevens, Leonard Rogers, C.I.E., Ernest Alan Robert Newman, Gordon Travers Birdwood, Reginald George Turner, James Davidson, D.S.O., Patrick Percy Kilkelly, Eric Harding Sharman, Bhola Nauth, and Thomas Howard Foulkes. Captains to be Majors (dated Dec. 27th, 1912): Anderson Gray McKendrick, Owen St. John Moses, John Wishart Little, Harold Rotherby Nutt, Norman Emil Henry Scott, Charles Edward Southon, James Husband, Henry Bertram Foster, Henry Warwick Illius, Edward Wemyss Browne, and Satis Bose; (dated Jan. 29th, 1913): Norman Septimus Wells, Edmund Hamilton Blake Stanley, Robert McLauchlan Dalziel, James Jackson Robb, and Shaikh Abdur Ruzzak.

The King has approved of the admission of the undermentioned to the Indian Medical Service as Lieutenants on probation (dated Jan. 25th, 1913):— Richard Reginald Maitland Porter, Robert Sweet, Edward Calvert, Patrick Joseph Walsh, John Robert Douglas Webb, Francis Phelan, Arthur Hilary Clifton Hill, Nawin Chand Kapur, Joseph Francis Holmes, Archibald Campbell Macrae, Haji Sulaiman Gulamhussein Haji, and Narayan Krishna Bal.

The Commissions of the following Lieutenants on probation have been confirmed with effect from July 27th, 1912:—John Dykes Wilson, Laurence Allfrey Pelham Anderson, William Calder Paton, James Bennett Hance, Stephen Gordon, Harold Kirkby Rowntree, Graham Yalden Thomson, Basil Franklin Eminson, Anthony Kennedy, Sorab Dhunjibhoy Ratnagar, and Colin McIver.

Surgeon-General A. M. Crofts, C.I.E., Deputy Director of Medical Services to the Second (Rawal Pindi) Division of the Northern Army in India, has been selected to officiate as Director-General of the Indian Medical Service during the absence on six months' leave home of Sir C. Pardey Lukis, K.C.S.I.

Colonel D. St. J. D. Grant has taken up duty at headquarters of the Karachi Brigade as Assistant Director of Medical Services, in succession to Colonel R. B. Roe, transferred to Third (Lahore) Division.

Lieutenant-Colonel J. B. Smith has been appointed by H.E. the Governor of Bombay in Council as Civil Surgeon at Poona, and has been granted an extension of his furlough home from India by the Secretary of State. Lieutenant-Colonel H. B. Melville, chief plague officer in the United Provinces of Agra and Oudh, has been selected for appointment as Civil Surgeon at Benares, in succession to Lieutenant-Colonel J. M. Crawford, granted eight months' privilege leave combined with furlough home from India.

H.E. the Viceroy and Governor-General of the East Indies has been pleased to appoint Major J. C. Robertson, Sanitary Commissioner with the Government of India, as an additional member of the Imperial Council. The Chief Commissioner of the Central Provinces has selected Major F. O. N. Mell, superintendent of the Central Jail at Nagpur, to the executive and medical charge of this jail. Major E. C. MacLeod, on return from leave, has been selected for appointment as Civil Surgeon at Darjeeling.

H.E. the Commander-in-Chief in India has selected Captain W. J. Simpson for appointment as Substantive Medical Officer to the 34th Prince Albert Victor's Own Poona Horse stationed at Aurungabad, in succession to Captain J. L. Lunham. Captain G. Fowler, civil surgeon in the Central Provinces, has been granted leave of absence home from India on medical certificate for four months in extension of the combined leave previously sanctioned. Captain H. H. G. Knapp has been permanently appointed to the Jail Department in Burma by the Government of India. Captain J. A. S. Phillips has arrived home on leave of absence from India. Captain J. B. D. Hunter, officiating agency surgeon of the second class, has been granted leave of absence combined with furlough and study leave home from India for 18 months.

Major Gage, I.M.S., superintendent of the Royal Botanical Garden at Sibpur, will shortly go on leave.

TERRITORIAL FORCE.

Royal Army Medical Corps.

1st Home Counties Field Ambulance, Royal Army Medical Corps: Charles William Greene to be Lieutenant (dated March 15th, 1913). Arthur Philip Draper (late Cadet, Dublin University Contingent, Senior Division, Officers Training Corps) to be Lieutenant (dated March 15th, 1913).

1st London (City of London) Field Ambulance, Royal Army Medical Corps: Captain Charles Stuart Brebner from the 2nd West Lancashire Field Ambulance, Royal Army Medical Corps, to be Captain (dated Nov. 28th, 1912).

3rd London (City of London) Field Ambulance, Royal Army Medical Corps: Lieutenant Bernard E. Potter to be Captain (dated Nov. 12th, 1912).

5th London Field Ambulance, Royal Army Medical Corps: Frank Coleman to be Lieutenant (to be supernumerary) (dated Feb. 6th, 1913).

6th London Field Ambulance, Royal Army Medical Corps: Supernumerary Lieutenant Edward P. Minett to be Captain (to remain seconded) (dated Feb. 11th, 1913).

THE MILITARY SURGEON.

The *Military Surgeon* for February (Chicago, U.S.A.) comes in a new dress from a new address. It has changed its editor, who is now Colonel S. C. Stanton, of the Illinois

National Guard, and its office has moved to Chicago to be near him. The first paper is an account of a field formalin disinfector planned by Major E. L. Munson, for killing parasites and sterilising clothing on active service. A small copper box 6 inches in diameter and 8 inches high has put into it 150 c.c. of 40 per cent. formalin solution, also 60 grammes of permanganate of potassium are put into a tray; the disinfector is closed, and the permanganate being by simple mechanism dropped into the formalin solution great heat is developed, and some 10 litres of formalin are given off, and conveyed, hot and moist, and at considerable pressure, into paper bags containing the uniform to be disinfected, or into bags extemporised out of rubber sheets cemented together at their edges by strips of two-inch plaster. Numerous experiments have been made with cultures of bacillus coli, all sterilised after over 15 minutes' exposure. The method is said to be convenient, effective, free from risk, and cheap, but no statement is given of the cost of the apparatus. Surgeon R. C. Holcomb, United States Navy, reports that the method of Paterson and Inman, of Brompton Hospital, the treating of consumptives by graduated labour, has been used in the United States Naval Sanatorium at Las Animas, and that it is a treatment of much economic value, as it reduces sputum, decreases temperature, and improves the patient's comfort; but it is noted that it has not yet been in use long enough to allow a complete estimate of its value to be assessed. Elsewhere in this number it is noted that it might be better to have several sanatoriums for the navy rather than to accumulate as at present all the consumptives of the service in one place. Surgeon Arthur W. Dunbar, of the United States Navy, notes that the service, in planning the physical education of recruits, desires to secure all-round athletes of moderate development, rather than record-breakers. While the average tuberculosis attack rate of the service in 1910 was 5·9 per 1000, the sick berth staff showed the high rate of 13·4 per 1000; as others of the class of "dry idlers" also had high phthisis attack-rates, it is proposed to see that they get more physical drill in the open-air. Surgeon Dunbar is not so convinced as other writers that the amount of venereal disease throughout the service is being materially lessened. The eyesight of gun pointers is being carefully examined, and the Elliott ear plug is the best protection so far known against the damage to the ear by gun blast, which did so much damage to the Japanese in the recent war. Anti-typhoid inoculation is justifying itself. The only case that died (one in eight) in the first half of 1912 had not been inoculated.

AN INDIAN MEDICAL SERVICE CENTENARIAN.

Surgeon-Major Henry Benjamin Hinton, late of the Indian Medical Staff, has just celebrated the anniversary of his 100th birthday. He is probably the oldest living active service veteran officer in the British Empire, and also the oldest member of the medical profession in the world. Major Hinton was born at Portsmouth on March 7th, 1813, and entered the Bengal Service in 1839. His active military service dates back to the Mahratta War of 1843. Major Hinton is the oldest living member of the British Medical Association and of the Royal College of Surgeons of England.

THE JAPANESE NAVAL MEDICAL DEPARTMENT IN THE RUSSO-JAPANESE WAR.

In the *Archives de Médecine et Pharmacie Navales* for December, 1912, Dr. Chemin, médecin de 1re classe (staff-surgeon) in the French navy, presents his sixth and last instalment of his translation of the official Japanese medical history of the war of 1904–05.[1] This concluding portion is mainly a report by the Surgeon-General of Sasebo Hospital on the nature, course, and treatment of wounds seen in naval actions, and is less vitally interesting to naval medical officers than were some of the others. The Japanese had two hospitals ships ready at the beginning of the war to carry their wounded to the naval hospitals at Kure, Yokosuka, Maizuru, and Sasebo. Of these Sasebo was nearest, and most of the wounded it received reached it in three days after injury. It was noted that, thanks to the care with which they were treated on the spot by medical officers of ships, the wounds were in a good state when men arrived, but a little later it was observed that the same was true of the wounds of men who had no treatment whatever at the time of injury, but perhaps a smaller proportion of them were received into hospital. Antiseptics applied at the time to a fresh wound, so good are the conditions in the Japanese ships, probably do harm by impairing the vitality of the surviving cells. When patients were received at Sasebo some had foul wounds, but there was no pyrexia, and it was astonishing how few had pain from their wounds unless these were complicated by fractures. When they got to hospital they were redressed, if possible, after washing with sterile water, with sterile gauze, under which they scabbed and healed. Infected wounds were washed with 1 to 3000 perchloride solution, and dressed with iodoform gauze or a mixture of boric and salicylic acid powders. Wounds were told off as due to shell fragments (including flying pieces of the ship), burns, ear troubles (ruptured membrane, contusion of middle or inner ear), and contusion from being thrown against the side of the ship, stanchions, bulkheads, &c.; generally wounds were multiple. Most were shell wounds. The fragments were large and heavy or small and light, and perhaps they were jagged, carrying with them dirt and infection; they may travel quickly or slowly, and penetrate or graze. They have little penetrating power, so a light armour for neck, chest, and abdomen is thought of. They never shatter bones as do high velocity bullets, but they play havoc with soft structures, particularly if they come up against a tough aponeurosis they can tear away. These huge wounds healed well. There were no cases of necrosis of bones or large or burrowing suppuration, and no generalised infections. There was in some cases an anxious time about the eighth or tenth day, when the wound edge swelled; there was pain and a dark brown discharge, which generally cleared up in four days, and thereafter their course was aseptic. So little penetrating effect have shell wounds that the inner table was hardly ever fractured in skull wounds. Torpedoes caused many injuries, though indirectly, and these cases suffered much from excitability—were, in fact, "jumpy." Amputation, it is said, will be rarer in the next naval war. Conservative surgery has greatly advanced since the war with China. The condition of the wounded as received at Sasebo improved continuously as this war went on. It is to be noted that the surgeons are not so strongly advised now to stitch every wound as they were in the official medical history of the Chinese-Japanese war, for to stitch them at once leads perhaps to tension, possibly to stitch track suppuration. Open shell wounds healed in two to four weeks, but if there was penetration they were delayed for another fortnight. Later, among the official notices it is announced that Staff-Surgeon Chemin has been given a home appointment, on which we congratulate him.

[1] See THE LANCET, vol. ii., 1911, pp. 914, 1040, 1294, 1655; vol. i., 1912, p. 1367.

Colonel S. J. Rennie (Lieutenant-Colonel, R.A.M.C., retired), commandant Northern Regiment, United Provinces Horse, has been appointed Honorary Aide-de-Camp to H.E. the Commander-in-Chief, India.

ERRATUM.—In our issue of last week, p. 780, in reporting the movements of the Indian Medical Service, we stated: "Captain H. Scott has been selected by H.E. the Governor of Madras for appointment as Surgeon on his personal staff." For Captain H. *Scott* should be read Captain H. Stott.

THE LATE SIR ALFRED JONES'S BEQUESTS.—Under the will of the late Sir Alfred Jones, the Liverpool School of Tropical Medicine will receive £40,000, and a further £40,000 when the annuities payable out of the estate cease. The present instalment will form a fund to be called the "Sir Alfred Lewis Jones Bequest," and will be devoted—(1) to defraying the cost of a new wing or ward to the Liverpool Royal Infirmary for the reception of persons suffering from tropical diseases; (2) to the erection of new premises in Liverpool for the study of tropical medicine, to be permanently associated with the name of the testator; (3) to the erection and equipment of a laboratory in Sierra Leone; (4) the residue of the gift is to be used as a permanent endowment. Other charitable bequests under the same will include £10,000 for a hospital at Garston; £3000 each to the Liverpool Hospital for Women, the Home for Epileptics at Maghull, and the Liverpool Seamen's Orphan Institution; and £1000 to Liverpool University

Correspondence.

"Audi alteram partem."

THE AGREEMENT TO ATTEND A CONFINEMENT AND ITS LIABILITY.

To the Editor of THE LANCET.

SIR,—The following are the short facts of a case in which judgment was given against our client, Dr. W. E. Falconar, and we submit that they may be of serious importance to your readers and the medical profession generally.

In or about October of last year a patient called at our client's surgery and stated she anticipated being confined the following January. Our client examined the patient and was of opinion that the confinement would take place on or about the 23rd of that month. The next intimation our client received was on Jan. 23rd last, when the patient's mother called upon our client at his surgery at about 11 A.M. and requested him to attend immediately, as her daughter was in labour. Our client informed her that he was extremely busy, as he had several patients awaiting attention in the surgery and had received urgent messages to attend cases (amongst them being a pneumonia and pleurisy case), and he was also due at a hospital to attend patients there. Our client offered the services of his partner, which services were declined. The patient's mother denied that the services of our client's partner were offered to her. Subsequently a medical man was obtained, at an increased fee of £1 1*s.*, and the child was delivered in the ordinary way. The patient's husband thereupon took out a summons in the Marylebone county court, claiming £10 damages against our client for breach of contract, and His Honour after hearing both sides awarded the plaintiff £2 2*s.* damages and costs, leave to appeal being refused.

We venture to think this case establishes a precedent, and is one which affects the medical profession seriously, inasmuch as a medical practitioner is now liable in damages should he be unable, through impossibility of performance, to carry out the agreement to attend the patient, the date of which, at the time when made, was uncertain. The only safeguard it now seems is for the practitioner to expressly stipulate he is only willing to attend when the time comes, provided he is in a position to do so at the time when called upon.

We are, Sir, yours faithfully,

BERRY TOMPKINS & CO.

Sardinia House, Lincoln's Inn-fields, March 15th, 1913.

THE ROYAL SOCIETY OF MEDICINE AND THE SOCIETY OF TROPICAL MEDICINE AND HYGIENE.

To the Editor of THE LANCET.

SIR,—We have noticed with great regret the letter from Lieutenant-Colonel J. B. Smith with reference to the negotiations which took place last summer between the council of the Royal Society of Medicine and the council of the Society of Tropical Medicine and Hygiene. It would not be opportune for us at this moment to reply in detail to Lieutenant-Colonel Smith's letter, seeing that negotiations are again pending between representatives of the two societies.

There are two things, however, which should be said emphatically and without any delay, and they are: (1) that the terms offered to members of a Tropical Section of the Royal Society of Medicine are not correctly described by Lieutenant-Colonel Smith; (2) that the council of the Society of Tropical Medicine and Hygiene desire only to represent the views and interests of the Fellows, and there can be little doubt that the council of our society will refer the question at issue to the Fellows before any final decision is made.

We hope that any of our Fellows will refer directly to us any views which they desire to put forward, and that a matter which is now *sub judice* may not be made the subject of public correspondence.

We are, Sir, yours faithfully,

CHARLES F. HARFORD, GEORGE C. LOW } Joint Secretaries

11, Chandos-street, Cavendish-square, London, W., March 15th, 1913.

WHEN TO OPERATE IN APPENDICITIS.

To the Editor of THE LANCET.

SIR,—I much regretted, as no doubt did the other surgeons, that Sir George Beatson was unable to be present at the discussion on appendicitis at the Medical Society of London We were all anxious to hear his views, and above all the reasons which determined his present attitude. In the two letters which Sir George Beatson has subsequently given to the press he has not afforded us such information. In the main he attacks the policy of immediate operation, though he admits that if the operation is done within the first 12 or 24 hours the results as regards mortality will be satisfactory. Is this all? Will not the occurrence of complications be much rarer?

As a strong supporter of "immediate operation" let me say that I have been driven into this position by watching the horrible results obtained by "waiting" surgeons—and I have been supported in this line by the encouragement of most of my medical colleagues. If this policy is a bad one why do they support it? It is quite incorrect for Sir George Beatson to state that this policy is the cause of a high mortality in the disease; on the contrary, those surgeons who have followed this line of treatment have obtained excellent results, as shown by the figures which they give—Burgess, Grey Turner, &c.—and these figures should be contrasted with those obtained during the period when "waiting" was the rule. At St. Mary's Hospital, 1902, there were 73 acute cases, with a mortality of 28·5 per cent.; in 1903 77 acute cases with a mortality of 30·5 per cent. In 1912, a "no wait" policy being generally adopted, 136 cases were operated on with a mortality of 5·9 per cent.; in these cases no discrimination is made, some were early, some were late, but the total mortality is very low as the very worst cases are included.

This "waiting" attitude has to be considered at two periods. 1. During the first few hours. It was for a long time the custom, in all cases, except with those showing very urgent symptoms, to wait in the hope that the inflammation round the appendix would subside—in many cases we admit that it did so; in others, unfortunately, a gangrenous appendix, unsuspected, ruptured, so starting a fulminating peritonitis. We have found that by operating at once we can often remove this gangrenous relic before it has ruptured, with a probable saving of many lives, and a certain prevention of many complications. What does Sir George Beatson do in such cases? Can he always tell whether gangrene is present? 2. The second period for waiting is variously given as the third fourth, fifth, or sixth day, showing that there is some difficulty in deciding which is the most dangerous period. Undoubtedly operations after the peritoneum has become extensively infected are dangerous, but are they necessarily more dangerous than waiting? A point that has not been emphasised is this: that if a case of appendicitis is allowed to drift on to the third day and further—with peritoneal infection—a certain number are going to die no matter what is done. We may talk about waiting for the abscess to localise, but supposing it does not, what then? Are we to stand by and watch a peritonitis spreading slowly over the abdominal cavity? I quite agree with Mr. H. H. Brown both in respect to the dangers of operating and also as to the cause of the danger and fatal results, but I have seen many such cases "watched," and an abscess which the surgeon fondly believed to be localising has burst or leaked in the general cavity of the peritoneum. We may rely on the defensive powers of the peritoneum, but it is not always our friend. How is this to be prevented? If *our* first line of defence be adopted and operation be practised at once, we shall be called upon less frequently to consider our attitude in regard to the "late" cases. In the great majority of fatal cases a "waiting" policy has been adopted, not necessarily by the surgeon, but by the general practitioner or

the relatives of the patient, and Mr. Edmund Owen's paper was an excellent effort to get people to abandon that position.

I hope Sir George Beatson will give us some assistance by answering some of my queries, and I hope also that he will pardon me when I add a few questions at the end of this rather long letter. I am quite open to conviction, and it is for Sir George Beatson and others who attack our present position to prove us in the wrong; but they must do so by figures and reasons, not by merely stating that we are blind. My questions are these :—

1. Sir George Beatson says that he is satisfied with the results obtained in 300 cases. What are the results? He does not say.

2. 300 cases seems a large number at first sight, but with Sir George Beatson's experience I should have expected a larger number, especially when surgeons considerably junior quote from double this number. Were all these 300 acute cases?

3. Was any "selective action" exercised either by Sir George Beatson or by those responsible for the admission of cases? What I mean is this, Do these figures comprise all the cases admitted *consecutively* on Sir George Beatson's taking-in days in all stages of the disease, or do any cases admitted on those days go under other surgeons?

4. Under what circumstances and at what stage does Sir George Beatson operate? What are the results obtained in those cases which are operated upon?

5. Sir George Beatson says he is satisfied with his results, and it may be that he has good reason for his satisfaction, in which case he will no doubt have made a number of converts among his colleagues, or perhaps I should say that he will have impressed them with the value of ancient rites, so that they have not strayed after modern gods! Is this the case?

I am, Sir, yours faithfully,

W. H. CLAYTON-GREENE.

Devonshire-place, W., March 17th, 1913.

WATER DIURESIS AND WATER RETENTION.

To the Editor of THE LANCET.

SIR,—I have been impressed by the fact that the daily ingestion of more or less considerable quantities of water, taken for the laudable purpose of flushing or washing out the system, is by no means always productive of good results. Indeed, in some instances the excess of liquid seems to determine an uncomfortable rise of blood pressure which is accounted for by the failure of its immediate object—viz., increased diuresis; in other words, the excess of water has not been eliminated, but has been retained and swells the general mass of blood.

Why some patients should be able to get rid of water rapidly while others only do so after the lapse of several hours is a question that had long been a puzzle to me. Thanks to the researches of Widal and his school, we are familiar with chloride and urea retention, but the discovery of the possibility of water retention, apart from chloride retention, is a further and most important departure. Light has of late been thrown on this subject, which is of great interest to spa practitioners, by the researches of Vaquez, Albarran, Widal, Merklen, and others, and as the matter comes within the scope of daily experience in mineral water resorts I propose briefly to discuss these results and their bearings on treatment.

In the normal healthy individual the amount of urine excreted is markedly and immediately influenced by the intake of liquid, any excess being promptly got rid of by more copious emission. Albarran has drawn attention to the interesting clinical fact that in presence of renal disease the excretion of excess water is delayed; in other words, the damaged kidney excretes water as best it can, and is unable to regulate its working function to meet an excessive intake of fluid. This explains why it is that the subjects of renal trouble require to pass water several times during the night—viz., that they are working off the accumulations of the day. There are certain other peculiarities to be noted in this connexion. Under ordinary circumstances more urine is secreted lying down than walking about, but in the normal healthy man the heightening of the blood pressure due to physical and mental exertion corrects this tendency, so that more water is passed in the daytime than by night, and the night urine is darker in colour and of a higher specific gravity than the day urine.

In cardiac subjects with a tendency to asystole, on the other hand, the much greater facility with which urine is secreted when the patient is lying down, as compared with the output when up and about, is very striking and possesses a certain diagnostic importance. In a case mentioned by Merklen the secretion was 254 c.c. lying down and only 86 c.c. when up—the so-called cardiac rhythm. In certain forms of nephritis, however, there is a curious tendency to equalisation of urinary secretion with possibly a balance in favour of the erect position—orthostatism; for instance, 98 c.c. an hour when up and only 84 c.c. in bed, so that the natural tendency is reversed. This, again, possesses considerable clinical significance, especially as it is associated, says Vaquez, with a reversal of the normal condition of things, in that the day urine is not only scanty but is dark in colour, while that passed at night is watery. In presence of this abnormal urinary rhythm, however, before we incriminate the kidney, we must make sure that the disturbance is not due to mechanical—that is to say, extra-renal—causes. It is obvious that any delay in the absorption of ingested liquid, as, for instance, in dilated stomach, congestion of, or degenerative changes in, the liver, and an enfeebled circulation consequent upon cardiac weakness or disease, will lead to a deficient supply of liquid to the kidney and consequently to delayed excretion, even in the absence of any imperfection on the part of the renal filter. For mechanical reasons this deficiency is most marked during the daytime; consequently the cardiac or extra-renal subject exhibits this tendency to exaggerated secretion in the recumbent position in a marked degree. It is, however, only because he is up and about all day that he excretes so much at night. If he passes much time on his back during the daytime the difference will not be so noticeable; hence, on admission to hospital this disturbance of rhythm often clears up altogether. No such effect is produced by change of posture in the subject of renal impermeability, since in his case the delay in the excretion of water is due merely to the inability of the kidney to afford it passage. The liquid taken during the daytime cannot be got rid of until the arterial tension rises high enough to force a passage, and this takes some eight or ten hours; consequently it is passed during the hours of darkness.

Vaquez has devised and carried out an ingenious, albeit simple, method of testing renal permeability to water, the results of which cannot fail to modify current views on mineral water cures and impose more discrimination in their application. These results may be summed up as follows. In the normal state the kidney responds to the demand for increased functional activity by promptly getting rid of the experimental water (600 c.c. taken fasting in the morning), elimination taking place slightly more rapidly lying down than standing up. In presence of extra-renal factors that hinder elimination the delay is well marked so long as the patient is up and about, but disappears when he lies down. This is the so-called cardiac rhythm. In renal cases artificial—i.e., experimental—polyuria does not take place, the secretion of urine not undergoing any increase during the hours that follow the experimental ingestion of water, and not being got rid of until, further ingestion having ceased when the patient retires to rest, the surplus is gradually worked off. Here the results are the same whether the patient be erect or recumbent. It follows that drinking large quantities of liquid is not necessarily followed by copious diuresis, and when the excess of water is not thus disposed of it accumulates in the organism, raising arterial pressure and giving rise to various circulatory disturbances. Clinical experience shows that there are conditions in which the quantity of liquid should be reduced, some indeed in which it must be strictly measured.

In chronic affections—gravel, gastro-intestinal atony, renal and hepatic insufficiency and auto-intoxications—therapeutical diuresis is indicated, and if by such means we can secure the passage of a large amount of clear urine the circulatory symptoms will subside. According to Professor Arnozan the best plan in mild cases is to give several tumblers of mineral water in the morning on an empty stomach, to be followed by a walk, but if experimental diuresis shows a reversal of the orthostatic formula, that is to say, if the urinary secretion lying down takes place with

the same rapidity as in the normal subject when taking exercise, the patient should only take small quantities of water in the morning and remain lying down. Subjects in whom water fails to determine any diuretic effects will do better on a dry regimen, but the desired action in these cases can sometimes be obtained by substituting carbohydrates for nitrogenous articles of food.

It is to be noted that renal lesions merely cause delay in the excretion of fluids which, as is also the case with urea, are not retained in the tissues, but accumulate in the blood and are gradually got rid of when the arterial tension rises to the necessary height under the influence of the retention. Water retention and œdema, as a rule, only take place in presence of chloride retention, but the delay in getting rid of liquids is sufficient to cause considerable disturbance of the circulation which in these subjects is already in an unsatisfactory state. There are, however, cases in which delay in the excretion of fluids is the only perceptible anomaly, and this isolated symptom often constitutes a premonitory sign of the renal lesion enabling us to intervene before it goes farther. As Vaquez points out, when, in addition to the delay in the excretion of fluids, there is more or less chloride and nitrogenous retention, it is even so a matter of extreme importance to determine the degree of impermeability to fluids in order to know what part it plays in the production of the symptoms and to regulate the diet of the patient accordingly.

I am, Sir, yours faithfully

ALFRED S. GUBB, M.D. Paris,
Consulting Physician at Aix-les-Bains, Savoie.
Mustapha Supérieur, Alger.

BREAD AND THE SPREAD OF TUBERCULOSIS.

To the Editor of THE LANCET.

SIR,—In paragraph 13 of the Final Report of the Tuberculosis Committee it is stated that "the principal classes of food in which those (i.e., tubercle) bacilli are at present found are meat, milk, and milk products." No mention is made of bread. It would be interesting to know if any investigations into bread as a source of conveyance of tubercle bacilli have been carried out, and, if so, with what result. The press has lately given us some insight into the methods and conditions of small bakehouses, and if their accounts are true there seems to be here a possible source of infection of scarcely less magnitude than in the case of milk—the more so as the bacilli would in the case of bread be of the human type. In any event, greater supervision of these places is desirable even if we are not prepared to abolish bakeries where bread is hand-made.

I am, Sir, yours faithfully,

ARTHUR H. PRIESTLEY, M.B. Vict.
Norwich, March 14th, 1913.

A QUESTION IN LUNACY CERTIFICATION.

To the Editor of THE LANCET.

SIR,—In Dr. Robert Jones's letter under this heading in your last issue, a statement occurs that reception orders signed by justices not specially appointed will be invalid unless countersigned by a justice who is specially appointed. Allow me to point out that they are valid and accepted by the Lunacy Commissioners, *vide* Lunacy Act, 1891, Sect. 24 (3), and patients can be and are often admitted on such orders and kept for 14 days from the date of the order, and after that, if before the 14 days elapse, the order is approved and signed by a judicial authority.

This is a great convenience in the provinces, where the specially appointed justices are not so well known as they appear to be in London, and it might take a considerable time to find out whether a justice happened to be specially appointed or not, and in urgent cases time is a great consideration.

I have known cases where specially appointed justices did not know that they were specially appointed, and often those who know it fail to add the statement of their being appointed to their description, which omission causes the Commissioners in Lunacy to send back the order, and then the medical officer who has received the patient has to either get the statement added and initialled by the writer, or the order signed by some other judicial authority. Practically any J.P. can sign a reception order which can be acted upon.

I am, Sir, yours faithfully,

L. HARRIS-LISTON.
Middleton St. George, co. Durham, March 17th, 1913.

THE THERAPEUTIC ACTION OF SPLENIC EXTRACT.

To the Editor of THE LANCET.

SIR,—In THE LANCET of Feb. 22nd Dr. Henry R. Harrower brought evidence to the efficiency of splenic extract in tuberculosis, typhoid, and malaria. He states: "It is a valuable remedy for the treatment of those conditions in which malnutrition is an important factor." Dr. Harrower, however, did not take into consideration the action of spleen extract (hormonal) as a powerful peristaltic stimulant, as demonstrated and proved clinically by Zoelzer, who used it in cases of chronic constipation. Zoelzer states that it is given in doses of 20 c.c. as hypodermic or intravenous injection. Might not its digestive action, as shown by Dr. Harrower, combined with its peristaltic action, so help assimilation and rest the digestive organs that its sole efficiency could be attributed to this phase and not to any other obscure effects?

I am, Sir, yours faithfully,

KRIKOR S. KRIKORIAN.
School of Medicine, American University, Beirut, March 6th, 1913.

THE VITAL STATISTICS OF LONDON.

To the Editor of THE LANCET.

SIR,—I am unable to understand how, in your article on the Vital Statistics of London, you can refer to the fall in the birth-rate as "a fact which can only be regarded as serious, whatever interpretation be put upon it." For, as you say further on, "we find that the death-rate of London has declined from 24·4 in the 1861–1870 decade to 15 in 1911, the lowered death-rate compensating for the lowered birth-rate." When a falling birth-rate is thus accompanied by a correspondingly falling death-rate—and statistics show that this is almost invariably the case—why deplore it? And why speak of Shoreditch as occupying "pride of place" among the metropolitan boroughs, when later you have to add that it "had the highest death-rate as well as the highest birth-rate"? Do statistics not generally show that high birth-rates mean high death-rates?

I am, Sir, yours faithfully,

BINNIE DUNLOP, M.B., Ch.B. Glasg.
Alexandra Court, S.W., March 15th, 1913.

THE PHARMACOLOGY OF FOOD.

To the Editor of THE LANCET.

SIR,—The isolation of a definite substance in minute quantity from certain foods, the assimilability or nutritive value of which depends upon this substance, looks as though the sound study of dietetics will have in future to be based in part on pharmacology. This seems, at any rate, to be the teaching of recent experiments. It is evident, for example, that when it is shown that an artificial mixture fails to feed satisfactorily in spite of its containing all classes of nutritive material known to us as proteins, fats, carbohydrates, and mineral salts, there is somewhere an overlooked factor the coöperation of which is essential to healthy nutrition and growth. The case of beri-beri is to the point, where it has been shown to the satisfaction of most of us that the disease is due to malnutrition arising from the consumption of polished rice. The "polishings" contain a nucleic substance, and the administration of this substance or the polishings themselves restore the animal to normal health. But it is not only in rice that this peculiar substance occurs, and therefore it is probable that disturbances in health may arise from a similar deficiency of nucleic substance in other foods. It is remarkable, at any rate, that it is present in the germ of the wheat, in meat, milk, eggs, the buds of vegetables, yeast, bran, and lime juice. The use of the last-named substance in scurvy is well known, and recently a nucleic principle has been recovered from lime juice which was found to cure avian polyneuritis.

This is important. With the constant occurrence of this vital substance in many foods the general consumer's chances

of getting his quantum of vitamine (as it is proposed to call it) are, of course, very favourable, but where for some reason the range of diet is restricted the ingredient may be missing, or at all events deficient in quantity. The diet on the old sailing ship caused scurvy to be a common disease amongst the sailors, and beri-beri in Labrador may with little doubt be traced to a diet which is practically exclusively white bread and tea. The deficiency of vitamine in the restricted diet of the poor may once more be accountable for a good deal of pathological misery amongst them. To the well-off it may not matter whether there is this deficiency in the bread they eat because ample compensation is supplied in the variety of foods which are at their disposal. This suggests to me a revival of the question of a standard bread, where the contention was that the germ of the wheat is essential to healthy nutrition. That contention proves sound in the light of the vitamine doctrine, although when a variety of foods is available a sufficiency of the peculiar principle is probably forthcoming, and therefore in such a case it matters little whether the bread is a standard loaf or a germless white article. The indications appear to be that in the future it will be desirable to standardise foods on their vitamine content as well as upon general chemical composition, and it may be hoped that the method of estimation of this principle will be simple and not difficult to carry out. The standard ultimately arrived at will clearly belong not only to dietetics but also to pharmacology.—I am, Sir, yours faithfully,

March 17th, 1913. F.C.S.

MEDICAL PRACTICE UNDER THE INSURANCE ACT.

(BY OUR SPECIAL COMMISSIONER.)

(Continued from p. 788.)

III.—THE FIGHT AGAINST THE PANEL AT GILLINGHAM.

Opposition to the Act in Kent.

Gillingham, Kent.

THE great differences in the industrial and social conditions in various parts of the country make it very difficult to work the National Insurance Act upon any uniform plan. This difficulty was no doubt foreseen by the Chancellor of the Exchequer; it was certainly kept steadily before him in the columns of THE LANCET, but little has been done to meet it. In Kent a good deal of resentment is felt against the manufacturing towns of the north for an acquiescence in the Act which has embarrassed the southern communities. What may suit Birmingham or Manchester is utterly out of place in the hop-fields of Kent. Thus, in the county of Kent the feeling was strong against the panel and the payment per head. Out of some 800 men only about 50 went on the panel. There can be no doubt that if the remainder had held out the Act could not have been worked in the county save under some scheme of national service that would have been costly and very troublesome. But the organisation of the profession was very imperfect, and there were too many who went round saying, "If so-and-so goes on the panel, then I shall be obliged to go on also." One or two men can break up the resistance of an entire town, and if one town gives way then resistance sags. Gillingham is comprised in the Rochester and Chatham Division of the British Medical Association. As it is the only portion of the division that has put up a good fight, its name should henceforth be included in the title. When all the districts met together they were very brave in their declarations and resolutions. Seven meetings were held during Christmas week, and the no-service resolution was adopted. But when the Chatham practitioners met by themselves they, on the contrary, decided to go on the panel. Nor was it the poorest and the most needy who were the first to go back on their word. It may also be noted that some medical men in the division have allowed their assistants to go on the panel. There is, for instance, a firm of three practitioners, and one partner has gone on the panel, thus securing for all the three whatever advantage may arise from an institution which they disapprove. The earliest to break up the unanimity of the profession in the division have not derived much benefit it is understood, and must not be credited with having acted selfishly. Indeed, it is becoming evident that those who have gone on the panel have not obtained all they expected. Medical men who have had poor practices may be able to improve their position; but in this part of the country the impression prevails that those who have decent practices will suffer. Many medical men with good practices who have gone on the panel have discovered that their crowded premises frighten away their best patients, while their second best patients have now become contract patients under the Act. Consequently they have more work for less pay. Nevertheless at Strood and Chatham many have yielded and gone on the panel; and now there is a danger that the profession may be divided into two factions, the panelites and the anti-panelites. Gossip says that at the Chatham club a division of this sort has been noticed already. I lay no stress on a rumour, the accuracy of which I have not tested, but the fact that there should be such a rumour is in itself sufficiently depressing.

Favoured Position of Gillingham Practitioners.

At Gillingham, however, the profession remains united against going on the panel, and the judicial way of approaching the fact is by inquiring whether Gillingham itself is an exceptional place. According to the Registrar-General's return for last quarter, the population numbers 53,500, and thereupon it has been said that from 17,000 to 18,000 persons should come under the Act. This, however, is quite a mistake. The district of Old Brompton is separated from the greater part of Gillingham by vast drilling grounds, so that it is much more convenient and nearer for its population of 4000 to 5000 to seek the services of the Chatham medical practitioners. Then there are about 4000 to 5000 soldiers in the barracks and 3261 sailors on board the ships. Some of the latter, but not all, have residences in the town. Further, there is the Royal Naval Hospital with about 1000 inmates. Thus out of a population of 53,000 there are barely 30,000 available so far as the Act is concerned, and it is a third of this latter and smaller figure which may be considered as likely to insure. Now, contract practice never had a great hold on Gillingham, though it might very legitimately be applied among the dock labourers. These only earn 20*s.* or 21*s.* per week, and a workman's cottage costs, in rent, about 5*s.* a week. Nevertheless, even some of these labourers have, apparently, managed to pay medical fees, and did not depend solely on the medical officer to a club or on any form of coöperation to obtain medical benefit. But though there are many dock labourers there is, nevertheless, a higher general level of prosperity than obtains in northern towns. While there is not distinctly a superior or wealthy class, there is much less poverty in Gillingham than in many more pretentious communities, and but a small proportion of the population need contract practice. Therefore at Gillingham the enormous majority of medical practitioners were in favour of not going on the panel, and to-day they attribute the fact that their attitude was not more generally adopted to the readiness with which panel service was accepted in the north.

The Insured Refuse Medical Aid.

There are many fairly comfortable though modest homes in Gillingham where the wives and families of sailors and petty officers live. They constitute a very good class for private practice and pay the ordinary lower rate of fees. They are not insured except for the maternity benefit. Then the dockyard mechanics have been working overtime for the last six months, and this is likely to continue. Consequently they have been earning more wages than usual and can pay medical fees when sickness occurs in their families. Under the National Insurance Act the medical profession derives no share of this increased prosperity, but obtains, of course, a measure of security in bad times which they would be without otherwise. There are only five medical practitioners on the panel at Gillingham. There are the two medical officers brought in by the Medical Aid Society to attend such members of that society as happen to be insured, but here it appears that some of these members refuse the services of their regular officers, preferring to forfeit their money by paying twice over for medical attendance. They have followed their old medical advisers. More than 50 members of the Medical Aid Society are paying 1*d.* a week outside the Act so as to be attended otherwise than by

their club medical officer. There is, for instance, a family of six—the father and mother, two adult sons, and two daughters. Of these six, five have come under the National Insurance Act. This family pays 6*d*. weekly for medical attendance outside the Act. Thus, for the five insured persons the practitioner who has undertaken to advise and provide them with medicine receives 21*s*. 8*d*. a year and does all the work. For these same five persons the panel doctors will receive 35*s*. and the panel druggists 7*s*. 6*d*. for doing nothing whatsoever. The five persons concerned are not likely to view the Act that places them in such a position in a very favourable light. The wisdom of their conduct may seem open to criticism upon economic grounds, but to medical men the spirit which places in the front the determination to be treated by the medical man of their choice must appear wholly laudable. There are so many insured persons at Gillingham who do not like to avail themselves of the medical service which the Act is supposed to provide that the impression prevails that a large practice could be secured by trading on this feeling. One practitioner threatened, and I believe he was at least half serious, to put up a notice on his premises saying: "All insured persons with cards can have advice and medicine for 6*d*." It was his belief that many people "would prefer paying 6*d*. to being branded as panel patients." If necessary he would keep open all day, so that patients would not have to wait, as is the case when they try to see a panel doctor; then they would get their medicine at once, instead of having to go to a pharmaceutical chemist and again wait a long time. To anyone who knows, as I do, the degradation of cheap club practice during the last ten years in some districts, such a frank return to its worst features seems terrible. The fact that such practice would not entail either the trouble or the loss of time upon the poor patient that the routine of the Insurance Act may impose must not blind us to the evils associated with sixpenny practice, however devoted the medical man may be to his professional life. Concerning methods of "smashing the Act" much has been said to me at Gillingham and elsewhere that need not be reported. The idea of responsible people at the present moment is to construct the policy upon which amendments can fairly be asked for abuses that have been proved to exist. None the less it is necessary that account should be taken of the existence in many places of deep resentment.

Popular Feeling against the Panel.

It is said that the public regard medical men on the panel in a different way from that in which they regard their colleagues not on the panel. This is a point which in other towns I will make the subject of inquiry—in Gillingham the feeling exists. What, perhaps, has most discredited the panel at Gillingham is that one practitioner who seemed likely to be successful left the panel after a few days' trial. This practitioner went on the panel under the belief that nearly all his colleagues would do the same rather than allow importations into the town. In a week's time he had some 500 names, but at least 20 per cent. of those who came to him with cards were already ill. One of them had to be at once operated upon for appendicitis. On the other hand, others who had nothing the matter with them insisted on a consultation. One youth came seven times under the impression that he had a disease of which he showed no real sign. It might have been possible for the medical man to attend to all these people but for the immense amount of clerical work imposed by the Act. It would have been easier to do the dispensing, he considered, than to keep the day-book. Though the services of a clerk were engaged, it was impossible to do the bookkeeping and to find sufficient time to attend to the patients. After ten days' work, extending on several occasions till 2 o'clock in the morning, this panel doctor gave in his resignation, saying that he preferred "to give up this work before a tragedy results from the impossibility of properly treating the insured when the doctor is burdened by the compiling of a mass of statistical details of no use to him, and a very real danger to the sick man." It will readily be understood that statements such as those contained in this letter of resignation were not likely to enhance the popularity of the Act in the town. New regulations will reduce the amount of clerical work imposed on panel doctors. Of course, this work was at the beginning of the Act coming into force exceptionally severe.

A Deadlock.

One of the practitioners who have remained on the panel explained to me that he only joined the panel on Jan. 8th, that he was working in harmony with all the local practitioners, and they had approved of his going on the panel so as to prevent the importation of whole-time men. He had not much work to do because the population was to a large extent opposed to the medical service as established by the Act. He had barely 400 names on his list, and a quarter of these had taken up their red ticket because they were actually ill. On the day of my visit he had 104 sick insured persons to attend; of these, 13 had commenced to be patients in January. Against this experience I may put that of a practitioner at Chatham who had gone on the panel, but left it in a panic on the third day when he saw the terrible crowd that had gathered outside his house. Practitioners who are very popular may find it pays best to keep off the panel if the experience of Gillingham is to count. They can keep their patients even though they are insured persons, but the chances of payment are injured by the compulsory instalment payments. At Gillingham, apart from the two club doctors and the medical practitioner just mentioned, there are two others, making five panel doctors in all. As there are only about 10,000 persons likely to be insured, and as many among them will not avail themselves of the medical benefits, it is urged that the number on the panel is enough. It is not known yet how many inhabitants of Gillingham are insured, and what proportion of the insured have taken out red tickets. But the three medical practitioners on the panel have not more than 1100 to 1200 names on their lists, and the two club doctors would not have nearly as many. Thus it is quite evident that the immense majority of the insured persons have not availed themselves of the Act. The public, as well as the profession, are out on strike against the panel. Such, in plain language, is the situation at Gillingham. Four out of the five panel doctors are newcomers. They have naturally not yet won the confidence of the population, which, in the vast majority of cases, remains faithful to its usual medical advisers. Now the Insurance Committee threatens to import whole-time men, but these will be even greater strangers than the actual panel doctors who have been in Gillingham during at least some weeks. Thus a deadlock has been reached, and the situation, like the war in the Balkan Peninsula, seems to have attained the state of stalemate.

(To be continued.)

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

End of the Winter Session at Manchester University.

THE winter session at Manchester University comes to an end on March 19th. The summer session begins very early this year—viz., on April 16th. For the first time in the history of the University degrees will be conferred in all faculties on the same day. The graduation in the summer term will take place on July 5th; hitherto the medical graduation took place at the end of July. The earlier graduation is possible by beginning the term in April instead of May as was the custom years ago.

What Manchester is Doing against Tuberculosis.

Manchester for many years has held an outstanding place in its endeavours to prevent tuberculosis. The public health department of the city and that of the University have worked hand in hand for many years with the result that the number of cases in the city has been substantially reduced. The departmental committee has just reported, and if the report is adopted the Manchester authorities will add to the value of their preventive work by arranging for research on a more extended scale and by providing open-air schools and other institutions for children either suffering from or susceptible to some form of tuberculous disease. The medical officer of health is one of those who hold that the whole of the money available for research under the Act should be distributed to existing research centres instead of part of it being spent on provision of a central laboratory. More especially has Manchester led the way in securing the innocuity of milk and milk products from tubercle. As long back as 1899 Manchester secured powers for dealing with

tuberculous milk. The effectiveness of the Manchester scheme is shown by the fact that in ten years the amount of tuberculous milk delivered in the city has been brought down to one-third of what it was originally. After the notification of tuberculosis there was organised a system of visits to diseased persons by officers of the health department in order to instruct the patient and his relations in the measures necessary to prevent them being infected. The result of all these efforts combined is that the death-rate of persons of all ages from phthisis has been reduced from 2·20 per 1000 in 1891 to 1·56 in 1911. The death-rate from other tuberculous diseases in the same period fell from 1·03 to 0·52 per 1000, while the death-rate from such diseases in children over five years of age fell from 6·57 per 1000 in 1891 to 2·74 in 1910.

Lancashire and the Want of Sanatoriums.

The demand for immediate sanatorium treatment for cases of phthisis is causing serious difficulty in Lancashire. The public health committee of the county council has arranged for 40 beds at the Meathop Sanatorium, 9 at Holcomb, and for others at some other institutions. About 180 phthisical persons have applied but no room can be found for them. Of these, 130 have been certified as cases for sanatorium treatment. The committee passed a resolution limiting the period of treatment to four months, except in special circumstances. Hospitals erected for small-pox cases are being utilised. Plans have been submitted to the Local Government Board to build of wood or other cheap material two sanatoriums, one at Ulverston and the other at Orrell, at a cost of £50 to £60 per bed.

St. Mary's Hospitals: Heavy Deficit.

The annual meeting in connexion with these hospitals was held on March 13th. As in previous years there was a considerable financial deficit. The income was £12,244, as against £9640 the previous year, but the total expenditure exceeded the income by £4050. Some of this increased expenditure was due to the fact that for the first time the hospitals as a whole had been fully worked. In all, nearly 20,000 patients received treatment during 1912. The chairman referred to the National Insurance Act, and said that so far as they could tell at present the application of the Act was not going to affect their voluntary subscriptions. His own feeling was that when the beneficial nature of the Act became better known and understood the danger of diminution in the voluntary subscriptions to the hospitals of the country would, with a very few exceptions, disappear and be forgotten.

Manchester's Rain Water.

Dr. Wolff has made investigations as to the hardness of rain water collected in reservoirs in this district. The contamination causing the hardness, it appears, is not due to any surface contamination, but is due to the rain water as it passes through the air bringing into solution a large quantity of impurities which are present in the air. Rain water, before it reaches the ground, showed hardness and contained lime and magnesium salts, and the hardness ranged from 1·5° to 165° (Clark), or about 58° on the average. Dr. Wolff said that the cause of the trouble was that the rain water dissolved the hardening constituents and other salts out of the atmosphere. This explained the fact that gardens in the park neighbourhood do not produce good results during rainy summers, while in a dry summer, when they have to be sprayed, they grow well.

March 17th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Prevention of Tuberculosis: A Scheme for Dublin.

FOR some weeks past the Dublin County Borough Insurance Committee and the public health committee of the city have been engaged in conference for the purpose of agreeing on a scheme for the tuberculosis campaign in Dublin. It is understood that the two bodies are substantially in agreement, and that a scheme will shortly be launched. In virtue of the public health committee carrying out a comprehensive scheme, the Insurance Committee will support it as far as its finances go. It will be necessary for the city to be provided with an additional tuberculosis dispensary, with increased sanatorium accommodation, and with accommodation for advanced and incurable cases. It is unfortunate that the corporation did not appreciate the importance of the office of chief tuberculosis officer, to which it will shortly have to make an appointment. The salary offered—£300 a year—is insufficient to attract a medical man of any standing, and without a tuberculosis officer who possesses the confidence of the medical profession and the public no scheme for the prevention of tuberculosis or its treatment can be attended with success.

Royal National Hospital for Consumption.

The position at the Newcastle Hospital is still the subject of much discussion in the daily press. As was to be expected, the correspondence has wandered away from the real points at issue, and various letters have appeared relating to the good effects observed in the persons of the writers or their friends who had been treated by the method now in vogue in Newcastle. Mr. R. Atkinson Stoney, discussing this question publicly, sums up the general professional view shrewdly:—

> Every doctor knows that, no matter what treatment is undertaken, a certain number of cases of tubercular disease recover, and that one of the most marked characteristics of tuberculous patients is the optimism which persuades them that they are improving, even when the disease is steadily progressing to a fatal termination. The medical profession have seen so many cures of consumption proclaimed from time to time that they are naturally sceptical of a new cure, and require something more than the unsupported word of the inventor, however distinguished he may be.

A suggestion has been made by a gentleman much interested in hospital work that the whole matter should be left to the arbitration of a certain philanthropic nobleman, but as the staff resigned on a matter of principle it is not likely that the suggestion can be accepted. Dr. J. B. Coleman, one of the late visiting physicians, gave an interview to an *Irish Times* reporter a few days ago, in which he pointed out that the suggestion that the staff had refused to avail themselves of modern methods of treatment was untrue. The hospital was the first place in Ireland in which tuberculin was administered under opsonic control, and not only tuberculin but dioradin had been given an extensive trial. The method now introduced had been put before the profession nine years ago, and been generally discarded.

Honorary Degree in Dublin University.

The Senate of Dublin University has passed a grace for the conferring of the honorary degree of M.Ch. on Mr. Robert Henry Woods, M.B., B.Ch. Dub., F.R.C.S. Irel. Mr. Woods is the well-known laryngologist, and is throat surgeon to Sir Patrick Dun's Hospital. He is President of the Irish Medical Association, chairman of the Conjoint Committee, ex-President of the Royal College of Surgeons, and last year was chairman of the Graduates' Committee in connexion with the bicentenary celebrations in the University.

Maternity Benefit.

At a meeting of the Ballymena board of guardians held on March 8th the following report was submitted in reference to a conference held with the dispensary medical officers in the union as to the medical fees charged in connexion with the Insurance Act:—

> That in all cases which in the opinion of the guardians or wardens any insured person would be entitled to free medical attendance under the Medical Charities Act, but who prefers to pay a nominal fee proportionate to their income, such persons to obtain medical assistance in maternity cases for the fee arranged between the medical officers and the guardians, which fees shall in no case exceed 10s. which shall be the minimum charge; any other case in which the maximum may be considered too high can be dealt with between the medical officers or wardens of the union, and a smaller fee agreed on. At the same time it must be distinctly understood that in no case shall this arrangement prohibit the insured person or any other from obtaining a red line in maternity cases should they demand them, and the guardians or wardens believe they are entitled to such under the Medical Charities Act.

The Local Medical Committee in Belfast has appointed a subcommittee, consisting of the staffs of the three maternity hospitals in that city and nine members of the Local Medical Committee, to consider the whole question of maternity benefit in its relation to lying-in hospitals.

March 18th.

PRESENTATION TO A MEDICAL MAN.—To mark his retirement from the position of honorary surgeon to the Bristol Royal Infirmary after 37 years' service, Mr. J. Paul Bush, C.M.G., was recently presented with a handsome piece of plate by his old "dressers" and house surgeons.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The International Congress of Physical Education.

THIS Congress was opened at Paris on March 17th, at the Sorbonne, by the President of the Republic. 1800 members enrolled themselves, and official delegates attended from all parts of the world. Professor Gilbert is president of the Congress; Professor Weiss, secretary-general; and Dr. Dausset, assistant secretary. The work of the Congress is being carried on in four sections. The Scientific Section deals with the physiology of physical exercises and with kinesitherapy. The Pædagogic Section studies the hygiene of the school child, military exercises, shooting, and feats of arms. The Applied Section is devoted exclusively to sports, games, and touring. The fourth section is occupied particularly with the physical education of women and with the influence of sport on the female organism. The morning sessions are reserved for the reading of papers and for discussions thereon, the afternoons and evenings being devoted to demonstrations. The meetings of the Congress are taking place daily from Monday until Thursday of this week inclusive. Thursday evening is devoted to a general meeting in the great amphitheatre of the Sorbonne and a banquet. On Tuesday evening Professor Pinard is to hold a conference at the Sorbonne on the future of the race. There will be a fête on Wednesday, at which the different methods of physical education will be shown by groups of girls from the Lycées Victor Durny and Lamartine, a group of 50 Italian girls from Turin, the monitors from Joinville le Pont, a group of Danish girls, gymnasts of the Union des Sociétés de Gymnastique de France, and marines. An exhibition also was opened on March 17th, containing a very complete and instructive scientific section, and artistic, historical, and industrial sections; also the work of Rodin and antiques from his famous collection. The Court of Honour of the Faculty is transformed into a winter garden and contains an important exhibition of contemporary artists—tapestries, engravings, arms, and so forth—being lent by various collectors. Throughout the whole period of the exhibition the Kinematograph Gaumont has been showing sporting scenes and films demonstrating various methods of physical education.

Philanthropic Bequests.

The Academy of Medicine has accepted the legacy of Dr. Marc Sée, a former *agrégé* of the Faculty of Medicine of Paris, of the sum necessary to provide an income of 500 francs to found a prize of the value of 1000 francs every two years for the author of the best work on some subject relating to anatomy and physiology. M. le Blanc de la Caudrie also, at his death constituted the Académie Française his sole legatee. He was very wealthy, and besides a private residence in Paris possessed a seaside chateau, with its appertaining houses, dependencies, lands, and woods. The Academy will offer the domain, together with the sum of 400,000 francs, to the Assistance Publique, to be converted into a convalescent home for women and children.

The Treatment of Leprosy.

Before the Société Française de Dermatologie et de la Syphiligraphie M. Jeanselme recently stated that he had successfully treated lepers with intramuscular injections of a mixture of 20 grammes of chaulmoogra oil, washed in alcohol and filtered through cotton, 1 gramme of guaiacol, 0·50 gramme of camphor, and 21 grammes of pure vaseline. This was sterilised at 110° C. and enclosed in ampoules containing 5 c.c. each. The resulting product is a homogeneous liquid which remains limpid indefinitely. The injections are not painful.

Sisters of Charity as Hospital Nurses.

M. de Puymaigre has made to the Conseil Municipal a suggestion for the utilisation of sisters of charity in the Assistance Publique. His proposal does not call for the giving up of lay nurses and sisters or impose any obstacle to their advancement. But as it seems necessary that the services of the Assistance should be extended in several directions, and particularly in relation to the creation of a new sanatorium for the tuberculous, it would be advantageous to appeal for aid to those religious communities recognised by the State, and to the members thereof who possess a qualified nurse's certificate.

Proposed Alteration of the Law regarding Serums.

In 1895 a law was passed with regard to the use of serums, interdicting their sale. For several years it entailed no difficulties, for it was recognised that the law was to be applied only to regulate their sale—that is to say, the exploitation of serums—and not to those cases in which an expert medical man on his own personal responsibility produced and made trial of a new product. But in 1911 the Court of Cassation at Rouen interdicted all professional employment of any serum that had not received official authorisation, even though the medical man himself administered the injections by way of treatment. The impasse thus created has led the medical authorities to intervene. The Syndicats de Médecins of Paris and of the departments have prevailed on M. Lebouco to bring forward in the Chamber of Deputies a Bill to secure freedom to the medical profession in this matter. This Bill excludes from the operation of the law medical men who, having justified their position by experiments on animals, on their own responsibility and at their own cost, make use of unauthorised serums for therapeutic trials. But they must first obtain an authorisation before putting their methods into practice. M. Morel, Under Secretary of State, is supporting M. Lebouco.

March 17th.

CHINA.

(FROM OUR OWN CORRESPONDENT.)

Extermination of a Leper Colony: a Barbaric Method of Stamping Out Disease.

THAT China has not, since the establishment of the Republic, drawn any closer to the standard of Western nations in respect, above all, of common humanity is evidenced by a recent occurrence at Nanning, in the Province of Kuangsi. Indefinite rumours appeared in the papers about the occurrence, and it was thought that they were probably much exaggerated. Later on, however, the Catholic Mission sent a letter to the *North China Daily News*, the leading Shanghai paper, giving a circumstantial account of what took place. It appears that some few years back the lepers of Nanning, harassed by the people, were driven to take refuge in a little wood situated at about half a mile from the suburbs. The Roman Catholic Mission, seeing these poor, abandoned by all, resolved to do what they could to alleviate their suffering by grouping them together in suitable buildings, and thus deliver the inhabitants of Nanning of all anxiety as regards them. Ground was bought near the leper village and the building of a suitable lazar-house actively pushed forward. Acting on the advice of the merchants of Nanning, who declared themselves greatly in favour of the proposed lazar-house, the Father in charge decided to ask for official approval of his scheme, and for that purpose asked for an interview which was granted for the following day. No officials, however, appeared, and the next day he received a letter from them which informed him that it was "forbidden to Europeans to do good here." It also stated that the officials themselves would choose a place further away and erect a lazar-house thereon. A few days later posters were found on the walls of the town, stating:—

> The lepers are the rejected of Heaven; it is impious to succour them. Why should we uselessly spend money on feeding them? The President of Kuangsi does not know where to find the necessary resources wherewith to pay his soldiers. Would not the Catholic Mission do better by helping our Government therein?

The Provincial President had already caused a similar massacre near Loungchow.

As the massacre was being discussed as a measure of public utility, the worthy Fathers renewed their attempts to plead the cause of the lepers and got into direct touch with the President, who received them politely and sent the Prefect of the town to visit them. During these perfidious deliberations a large pit was being dug on the parade ground, the intended use of which was not suspected by the Mission. But the following morning the Fathers received the report that "the leper village was surrounded at daybreak and all the inhabitants massacred."

The details of the atrocious deed are as follows. More than a hundred soldiers surrounded the village so that none could escape. The lepers were then driven at the point of the bayonet to the parade ground, to the pit that had been so carefully prepared. A thick layer of wood covered the bottom of the pit into which all were obliged to descend. One by one the poor women carrying their babies descended the ladder and took their seat on the fatal pile. Then the cry of "Sha" (kill) burst forth, rifle fire was opened on the victims, a copious supply of petrol was poured over them, and a burst of flame announced to the town the victory of the literati. This was not all, however. "Man hunting" was begun; $10 was the price laid on the head of every leper. The morning on which the Mission wrote their letter a young man had been arrested at his home amongst his family, taken to the parade ground, shot, and burned.

A proclamation was issued which showed the Government was evidently proud of its exploit. In order to save their official "face" it was felt necessary to blacken the characters of the lepers. The following is a translation of the proclamation:—

I, Tuan Han-ming, in order to make known to the people: The lepers commit abominable excesses and are feared by the whole world. They profit by their disease to molest the inhabitants of villages, outrage women, rob them of their money. The recital of their crimes makes one's hair stand on end. I referred the matter to the President (his brother-in-law, the Tu tuh Lon Yung-t'ing) who, by a secret order, commanded me to seize and kill all the lepers in Nanning. At once I had a large pit dug and on the morning of the 14th I caused them to be surrounded and arrested and exterminated all the lepers. Thus we are delivered for ever of their contagion. I assured myself of universal approval.

Comment is needless. One can read the above circumstantial account more with horror than surprise. In Nanning it is clear the official in charge is Republican only in title. He is one of the old school, and of that section of it which in former days preferred to let evil continue rather than permit good to be done by the hated and despised foreigner. Little is to be expected in the way of retributive justice. From Nanning to Peking is a far cry, and any attempt at punishment of the officials concerned would probably only demonstrate afresh the absence of control over the provinces, which is not the least of the Central Government's deficiencies.

Feb. 15th.

NOTES FROM INDIA.

(FROM OUR OWN CORRESPONDENTS.)

The Director-General of the Indian Medical Service.

Surgeon-General Sir C. Pardey Lukis, Director-General, Indian Medical Service, goes home on leave this summer, and the question of his successor is under consideration. The selection lies presumably between Surgeon-General A. M. Crofts, C.B., Deputy Director of Medical Services, 2nd (Rawalpindi) Division, and the Honourable Colonel C. C. Manifold, Inspector-General of Civil Hospitals, United Provinces of Agra and Oudh.

New Delhi.

As the Secretary of State does not propose to publish the first town-planning report of the Delhi experts the report will not be made public by the Government of India. There seems to be a growing feeling among the general community that efforts should be made to construct the new city in the vicinity which is now occupied by the Ridge and the temporary buildings near where the King laid the foundation-stones. On the other hand, it is believed that the experts have been told that the city must not exceed a certain cost, and, this being so, it is believed they will be obliged for various reasons to recommend the southern site.

Calcutta Eating-houses.

The necessity for the inspection of eating-houses in Calcutta has recently been considered by the Health Special Committee, which has decided to place the matter before the corporation and to make several important recommendations for the protection of the public. The committee is of opinion that all eating-houses, restaurants, hotels, messes, and similar places to which the public have access, as well as the kitchens in which the food is prepared, should be open to inspection at all times, by night and day, by officers of the Health Department, and shall be kept in a sanitary condition. The health officer is to be asked to draw up regulations for the licensing of such places and for their general cleanliness, and arrangements are to be made for the imposition of heavy penalties upon those who neglect the rules.

Sanitation in the Suburbs of Calcutta.

The Calcutta Improvement Trust is dealing with the problems before it with courage and wisdom, and it is believed that within the next decade the most congested and dirtiest portions of the town will be transformed into healthy and bright localities. Now, however, the growing suburbs as well as the city itself are beginning to claim attention, as there has been a large shifting of the population, due to high rents in the central parts and to the increased facilities for residing outside the city offered by railways, tramway services, and steam ferries. The result is that streets of dwellings of the poorest class are growing in an ugly, haphazard, and particularly insanitary way. It will be useless to clean and garnish Calcutta within the municipal limits if there is a chance of its becoming surrounded by congested and dirty suburbs, the breeding place of disease and crime. In the near future therefore the administration may find itself faced with a problem even more difficult than that which is now facing it in Calcutta.

The Physique of Indian Soldiers.

The current number of the *Journal of the United Service Institution of India* contains an article of quite exceptional interest by Colonel R. H. Firth, R.A.M.C., Assistant Director of Medical Services, 1st (Peshawar) Division, on the Physique of Indian Soldiers. The standard which he applies, in comparing them with German recruits, is that which is in general use in continental armies, known as Piguet's formula, so called after the French army surgeon who first enunciated it. The "Piguet factor" is based on the relations between the height, the weight, and the chest measurement. The larger the factor the poorer the physique; conversely, the lower the factor the better the physique.

New Hospital at Hissar, Punjab.

In the course of a recent visit to Hissar Lady Dane laid the foundation-stone of the Lady Dane Zenana Hospital presented by Messrs. Raj Sahib Tata Chand and Murli Dhar of Bhiwani. The hospital which the new building will replace is unworthy of the headquarters of the district. The buildings are old Customs buildings, adapted by modification many years back to the needs of a hospital, and are unsuitable to modern requirements. Considering the unsuitability of the buildings and inconvenience for surgical work the hospital has, however, done good work. The out-patients number on an average 15,000 annually, the daily out-door average attendance is about 115, and about 900 total operations and 130 selected operations are performed every year. With a better hospital and a suitable operating room it will be possible to improve these figures very much. The new hospital is intended to be a zenana hospital in its strictest sense.

Kala-azar in Assam.

Captain W. L. Harnak, I.M.S., civil surgeon of Kamrup, has recently examined a large number of the residents in 67 villages in the neighbourhood of the main road to Bhuran and found that no less than 14 were infected with kala-azar. With the exception of two, all these villages are grouped together around the main road. There have been 82 deaths within the last few years from kala-azar in these villages. It seems that the infection was carried by men returning to their villages from other parts of Assam.

Sanitation in Burma.

The sanitary staff is likely to be expanded in Burma in consequence of the grants made to the province by the Government of India. The full amount allotted cannot be spent at present owing to the want of a completely organised establishment. The unspent balances will be allowed to accumulate, so that the money will all be eventually applied to its special purpose.

Indian Ambulance in Turkey.

The All-Indian Medical Mission is now at Omarli, behind the defences at Tchataldja, whither it has been sent by Field-Marshal Ahmed Abouk Pasha, after consultation with

General Abduffalam Pasha, who is in charge of medical arrangements. A further sum of £1000 has been remitted to Constantinople for the Turkish Relief Fund by the Sind Red Crescent Society. This brings the total up to date to 1 lakh and 4000 rupees.

The St. John Ambulance Association.

The office of the honorary and general secretary of the St. John Ambulance Association (Indian branch) has been permanently transferred to Jutogh, Simla Hills, and the *Indian Ambulance Gazette* will in future be published there.

March 1st.

Obituary.

JOHN SHAW BILLINGS, M.A., M.D.,

LIEUTENANT-COLONEL AND DEPUTY SURGEON-GENERAL U.S. ARMY, DIRECTOR OF THE NEW YORK PUBLIC LIBRARY, LATE CHIEF LIBRARIAN OF THE LIBRARY OF THE SURGEON-GENERAL OF THE U.S. ARMY, WASHINGTON.

To medical writers and zealous students of medical literature all the world over the announcement of the death of Lieutenant-Colonel John Shaw Billings will occasion profound regret. It is well that the medical profession everywhere should realise how deeply the progress of medical science is indebted to his labours as a librarian and bibliographer for throwing open to the world at large the treasures of medical literary industry, remote and recent, scattered throughout innumerable volumes, pamphlets, and medical periodicals.

John Shaw Billings, who died on March 11th in New York, aged 76 years, was a native of the State of Indiana. He graduated in Arts in 1857 at the Miami University of Ohio, and in 1860 took his M.D. degree in its medical college at Cincinnati. He served as an army medical officer throughout the American Civil War. After the war he became attached in 1873 to the Surgeon-General's Office in Washington, and was appointed curator of the Army Medical Museum and Library, where he undertook the organisation of a reference library. He at once began work looking to the preparation of a catalogue. Some idea of the colossal magnitude of the task, one of ever-growing dimensions as it proved, may be gathered from the following facts. The Surgeon-General's Library at the beginning of 1876, when the catalogue was actually begun, contained about 52,000 books and pamphlets, and it was then estimated that the catalogue would be completed in five volumes of 1000 pages each. But the organisation of the work of cataloguing, which, with remarkable prescience, Dr. Billings had worked out rather from the point of view of the convenience of the worker who would be likely to refer to the catalogue for information than in accordance with the then current methods of librarians, greatly stimulated the growth of the library, with the result that it required 16 such volumes to complete the alphabet in the first series. By the date of publication of the sixteenth and last volume in June, 1895, the library had so increased that it contained 308,445 books and pamphlets, and the 16 volumes of the Index Catalogue contained references to 176,374 author titles, covering 85,663 volumes and 151,504 pamphlets, while the subject titles embraced 168,557 book titles and 511,112 references to articles in medical periodicals. By this time a second series was in preparation, to include all the titles of books and articles received too late for insertion in the first series, and it was then estimated that this would require five more printed volumes of the same size and style as those constituting the first series. But this estimate took no account of the progressive growth of the library, stimulated as it was by the increasing recognition of the value of Dr. Billings's labours. So recently as in THE LANCET of March 15th (p. 762) we reviewed the seventeenth volume of this second series, from which we learn that the library then contained 178,741 bound volumes and 317,740 pamphlets, and that the total number of references in the Index Catalogue to date, including both series, amounted to 327,488 author titles, covering 159,207 volumes, and 303,345 pamphlets, while the subject titles embraced 289,826 book titles and 1,043,253 articles in medical periodicals; also 5012 portraits, of which 4335 were included in the first series.

With the publication of the sixteenth, the last, volume of the first series in 1895, Dr. Billings, who had attained the army rank of Lieutenant-Colonel and Deputy Surgeon-General, retired from his post. In the preface to that volume he recounts the history of the growth of the library and of the great enterprise of the Index Catalogue, and says: "This is probably the last volume of the Index-Catalogue which will be issued under my personal supervision, and in closing the work I can only say that it has been to me a labour of love, and that I am very thankful that I have been allowed to complete it, so far as the first series is concerned."

Testimony to the extraordinary scope and especially the accuracy of this great bibliographical work—both an index and a catalogue to nearly everything of value that has been published in any language and in all times, ancient as well as modern, in regard to medicine and the scientific, historical, economic, and ethical aspects of the medical profession—is freely given by many scientific workers, but one shall suffice. Sir William Osler, in a memorial notice of Dr. Robert Fletcher, who was associated with Dr. Billings in this great enterprise, and to whom Dr. Billings bears eloquent testimony in the preface to the first volume of the work, says: "Those of us who have made frequent use of the Index Catalogue must have been impressed with one point—its extraordinary accuracy. In my experience it has been very rare indeed to find a mistake in the reference, either to the name of the author or to a journal." The *Encyclopædia Britannica* refers to the work as "an analytical printed catalogue of world-wide fame." Further, Professor Osler,[1] in an address delivered in 1902 before the American Association of Medical Librarians, said: "While there is not in American medicine much of pure typographical interest, a compensation is offered in one of the most stupendous bibliographical works ever undertaken. The Index Catalogue of the library of the Surgeon-General's office atones for all shortcomings, as in it is furnished to the world a universal medical bibliography from the earliest times. It will ever remain a monument to the Army Medical Department, to the enterprise, energy, and care of Dr. Billings, and to the scholarship of his associate Dr. Robert Fletcher."

In 1890 Dr. Billings published the "International Medical Dictionary," including the English, French, German, Italian, and Latin technical terms used in medicine and the collateral sciences. It was in two volumes, in which 84,844 words and phrases were defined, of which 25,496 were Latin, 9158 French, 16,708 German, and 6514 Italian, exclusive of synonyms given only in connexion with English or Latin primes. He also wrote much on barracks and hospitals, on hygiene and sanitation, and his report on the Cholera Epidemic of 1873 in the United States was of great value.

In 1891 Dr. Billings was appointed to the chair of Hygiene at the University of Pennsylvania, which post he filled until 1896, when he accepted the directorship of the New York Public Library. Here again his great organising and administrative capacity found a field for exercise, and he threw himself into the extension of the work with his accustomed energy and prescience. At the time of his death he had only just completed his colossal scheme of consolidating the Astor, the Lenox, and the Tilden Libraries, and housing them in the newly erected central building with a most extensive reference department and linked up with many branch libraries.

Another great service to medicine rendered by Dr. Billings is to be found in the Johns Hopkins Hospital, the plans and supervision of which were due to him. He was a recognised authority on the construction and organisation, the heating and ventilation of hospitals; while his work in relation to the Census of the United States has made available for scientific use a fund of most valuable statistical knowledge.

Dr. Billings happily lived long enough to see his labours bear fruit and their continuance in a competent manner assured. He had the satisfaction also of having his services gracefully acknowledged by academic honours in many countries during his life. In his own country Harvard in 1886 honoured him with its LL.D. degree, in which recognition, however, Scotland, through Edinburgh University, has the credit of forestalling it by having conferred on him its LL.D. in 1884. In 1889 England likewise

[1] Aequanimitas, p. 310.

honoured him, through Oxford University, which created him a D.C.L., and in the same year Germany added its testimony by conferring on him the M.D. degree of Munich. In this it was followed by Ireland, which gave him the M.D. of Dublin University in 1892. Hungary in 1896 added the LL.D. of the University of Budapest, while in 1901 and 1902 his native country added still further to his academic hallmarks by conferring on him the LL.D. degrees respectively of Yale and Johns Hopkins Universities.

The work of the medical bibliographer and librarian is not limited to keeping the medical profession *au courant* with what is being done to-day. It has the further, and even more important, functions of assisting the progress of medical science by marking for the worker the paths that have been tried before and found to be blind alleys, by leading him to the rediscovery of long forgotten truths or methods which may point the way to a new departure, and by bringing into his own field of vision for comparative study, not only the necessarily limited results of his own personal observations or those of his immediate and contemporary co-workers, but the scattered results in the same field of work that have been attained by other workers in distant fields and at different times, and which lie inaccessibly buried in periodicals or musty and forgotten tomes, in the tongues, living or dead, of all nations. And all these functions are typically exemplified in the analysis of the world's medical literature, now firmly established as a progressive institution in the Index Catalogue, whose generation and care through infancy and adolescence to vigorous adult age was the "labour of love" of Dr. John Shaw Billings.

Sir William Osler writes: "Dr. Billings was an army surgeon, served through the Civil War, and passing through the various grades of the service was retired with the rank of colonel. This is the official record. Incidentally, he was one of the greatest bibliographers and librarians of his generation, and with this work his name will always be associated. He built up one of the largest medical libraries —if not the largest—of the world. That the Surgeon-General Library, Washington, is a unique collection is owing to his remarkable skill and judgment. The Index Catalogue is one of the most important bibliographical works ever undertaken. The conception and the organisation were his. After retiring from the army he consolidated and managed the New York Public Library, and lived to see it housed in the present superb building. There is no parallel record in our history. At intervals he found time to plan the Johns Hopkins Hospital, to write a big dictionary, to superintend the vital statistics of two Censuses, and to do all sorts of odd jobs in connexion with public health. How was it all done? By work, incessant work, and a rare gift for organisation. Dr. Billings was a man of simple tastes, of few words, devoted to his family and to his profession. Those of us who were his associates in organisation of the Johns Hopkins Hospital can never forget how unsparing he was of his valuable help, and to me his friendship was one of the most precious gifts of those early days."

GEORGE SAUNDERS, M.D. ST. AND., C.B.,

DEPUTY INSPECTOR-GENERAL OF HOSPITALS; PRESIDENT OF THE MEDICAL MISSIONARY SOCIETY; CONSULTING SURGEON TO THE METROPOLITAN EAR, NOSE, AND THROAT HOSPITAL.

WE regret to record the death of Deputy Inspector-General George Saunders, which took place at Tunbridge Wells on March 6th. He was born at Cork in 1823, and was the third son of the late Lieutenant-Colonel R. Saunders, of the Royal Newfoundland Companies. He came of a family of soldiers. Having determined on a medical career he left Newfoundland for London in 1841, and entered as a student at St. Bartholomew's Hospital, afterwards studying in Paris. He entered the army in 1845, and after spending some time at the Fort Pitt Military Hospital at Chatham became an army surgeon in the 47th Regiment. When the war with Russia broke out in 1854 his regiment was ordered to Turkey. He was present at the capture of Balaclava and at the siege of Sevastopol, and for his services obtained the medal with three clasps and Turkish medal. In 1856 he was ordered to Capetown, and was five years in South Africa. He subsequently went to China and Japan, and in Hong-Kong had to deal with a serious epidemic of cholera, fever, and dysentery. The arrangements for quartering the troops were very inefficient, and it was only after becoming personally responsible for a sum of £2000 that he obtained the use of an empty house in which to treat his patients. His name was specially brought to the favourable notice of the authorities in despatches, and the important services which he rendered in China resulted in his being recommended for the Companionship of the Bath. His zealous and efficient services were also repeatedly brought to the notice of the head of his department, both by the military and medical superiors under whom he served. In the House of Commons in 1866 great admiration was expressed for his conduct as surgeon of the 9th Regiment, when, in the absence of his senior, he took complete responsibility and saved many valuable lives. In the same year Colonel W. Sankey, of the 9th Regiment, in giving evidence before the Select Committee of the House of Commons on the mortality of troops in China in 1866, referred to the manner in which Surgeon-Major Saunders had performed his duty, not only as acting principal medical officer of the station but also in looking after the sick of his own regiment. Colonel Sankey contended that he did not think any man in the British service could have performed his duty in a more honourable, noble, and talented manner. Soon after being invalided home Inspector-General Saunders was offered the post of principal medical officer to the Abyssinian expedition, which he was reluctantly compelled to decline on the ground of ill-health. He retired in 1871, and after leaving the army occupied himself with medical missions. For many years he laboured for the benefit of the poorest in the district of St. Giles, and was appointed medical superintendent of the London Medical Mission. Here his marked powers of organisation did much to relieve pain and suffering amongst the poor of London.

Inspector-General Saunders married Isabella, the daughter of the late Mr. Thomas Bailey, J.P., of co. Fermanagh, who lived to celebrate with him their golden wedding in 1902. Of his three sons, two of them entered the medical profession.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Tennes Thams, of Fargo, North Dakota, a Swedish practitioner who, after having identified himself in his own country with the political views of Björnstjerne Björnson and Erik Vullum, went to America and settled in Minneapolis. There he practised not only amongst Scandinavians, but had a considerable consulting practice amongst all nationalities. He, however, gave offence to some people by taking up the cause of the so-called "Knights of Labour," and afterwards removed to Fargo in North Dakota, where there is a considerable Norwegian colony. He there established a hospital, where he laboured, especially devoting himself to the study and cure of tuberculosis.—Dr. Rudolf Frank, extraordinary professor of surgery in the University of Vienna, from septic pneumonia and meningitis.—Dr. Ezequiel Castilla, formerly secretary of the Argentine National Department of Hygiene.—Dr. Teodoro Gaztelú y Zabarte, a Madrid physician, who devoted himself largely to electro-therapeutics, and who had been the official delegate of Spain to the Liège Congress of Physiotherapeutics and the Rome Congress of Neurology. He was only 38 years of age.—Dr. Francesco Fede, professor of clinical pædiatry in the University of Naples.—Dr. J. G. Patoir, professor of forensic medicine in the University of Lille.—Professor A. Podvyssotski, Director of the Institute of Experimental Medicine, St. Petersburg.

GREAT NORTHERN CENTRAL HOSPITAL.—At the annual meeting of the governors last week Mr. H. J. Tennant, M.P., who presided, in moving the adoption of the report, said that 2517 in-patients had been treated last year, and in the out-patient department there had been 23,484 new cases with total attendances of 84,107. He regretted to say that although the annual subscriptions had slightly increased the total income of the hospital had fallen by a sum of £4041. He hoped that the people of Islington and the benevolent public generally would do all they could to help the hospital, which was doing such a large and valuable work for the sick poor of North London.

THE NATIONAL INSURANCE ACT.

THE CANVASSING OF THE PUBLIC: ACTION BY THE GENERAL MEDICAL COUNCIL.

THE following communication has been addressed to the National Insurance Commission (Joint Committee) and to the Commissions for England, Scotland, and Wales:—

299, Oxford-street, London, W., March 14th, 1913.

To the Chairman of the National Insurance Commission,—

DEAR SIR,—The attention of the Executive Committee of the General Medical Council has been called to a number of communications in which it is alleged that objectionable methods of advertising and of canvassing have been employed in various parts of the country with the object of procuring the enrolment of insured persons or their dependants as the patients of particular medical practitioners. In some instances it is stated that the advertisements were so framed as to suggest that they were issued with the cognisance of the Insurance Commission or of local insurance authorities; in other instances touting or canvassing for patients is said to have been practised in the supposed interest of approved societies and institutions and of medical practitioners associated with the National Health Insurance service.

The General Medical Council has repeatedly taken steps to inform practitioners themselves of the grave liability they incur by resorting to practices of the kind, and has more than once had to exercise its disciplinary functions in restraint of wilful offenders. It appears, however, to the Executive Committee that some of the local authorities, institutions, and societies concerned with the administration of medical benefit under the National Insurance Act, may have acted in ignorance of the principles which guide professional conduct in relation to advertising and canvassing, and have thereby seriously endangered the position of practitioners who are professionally associated with them. The Executive Committee is accordingly of opinion that it would subserve the public interest and conduce to the proper administration of the National Insurance Act by the bodies in question were the Commissioners to call the special attention of all Insurance Committees, Local Medical Committees, and Approved Societies and institutions to the appended warning notices, which were published by the General Medical Council on June 6th, 1899, and Dec. 1st, 1905, and are still operative.

I am, Sir, yours faithfully,

DONALD MACALISTER, President.

Resolutions of the General Medical Council.

The General Medical Council considers that, in the interests of the medical profession, it is advisable to bring to the notice of its members certain resolutions which have from time to time been adopted as expressing the views of the Council upon certain forms of professional misconduct which have been or may be dealt with as amounting to "infamous conduct in a professional respect" within the meaning of Section 29 of the Medical Act, 1858. The Council, however, wishes it to be distinctly understood that these resolutions are not exhaustive of the forms of professional misconduct which may be dealt with by the General Medical Council under its disciplinary powers, and that the Council is not in any way precluded from considering and dealing with any form of professional misconduct outside the scope or precise language of the following resolutions:

(1) "That the Council strongly disapproves of medical practitioners associating themselves with medical aid associations which systematically practise canvassing and advertising for the purpose of procuring patients." (June 6th, 1899.)

(2) "Whereas it has from time to time been made to appear to the General Medical Council that some registered medical practitioners have, with a view to their own gain and to the detriment of other practitioners, been in the habit of issuing or sanctioning the issue of advertisements of an objectionable character, or of employing or sanctioning the employment of agents or canvassers, for the purpose of procuring persons to become their patients: And whereas in the opinion of the Council such practices are contrary to the public interest and discreditable to the profession of medicine: The Council hereby gives notice that any registered medical practitioner resorting to such practices thereby renders himself liable to be charged under the 29th Section of the Medical Act, 1858, with 'infamous conduct in a professional respect,' and if after due inquiry he is judged by the Council to have been guilty of such conduct the Council may, if it sees fit, direct his name to be erased from the Medical Register." (Dec. 1st, 1905.)

GERMAN INSURANCE STATISTICS.

The now published official statistics for the year 1911 of compulsory insurance against sickness in Germany show that the incidence of illness among the insured was considerably above the average. During 1911 the average number of persons insured against sickness amounted to 13,619,048, an increase of 549,673 over the preceding year, who were members of 22,778 different clubs.

Exclusive of the treatment of the insured persons' dependents, there were in all 5,772,388 cases of illness among the members, coupled with incapacity for work; this represents an increase of 575,308 cases as compared with 1910. The incidence of illness among the insured amounted to 42·4 per cent., against 39·8 per cent. in 1910, a marked increase, and showing an increase of no less than 6·9 per cent. over the average incidence of illness during the period from 1885 to 1911, which averaged 35·5 per cent. On the other hand, the duration of each case of illness showed a slight improvement. The average length of each case of sickness coupled with incapacity for work—i.e., during which the insured received sick pay or underwent treatment in an institution—amounted to 19·9 days, against an average of 20·1 days in 1910. For every 100 insured the days of illness amounted to 845·4 in 1911, against 801·2 days of incapacity for work with sick pay in 1910. During the period from 1885 to 1911 the average number of days' illness per 100 insured is 672·4, so that the record of 1911 exceeds the average by no less than 173 days.

The total income of the sick clubs amounted to £24,546,403, and the expenditure to £23,454,360. The cost of medical attendance—i.e., the remuneration to club doctors and specialists—amounted to £4,187,711, or £365,687 more than in 1910. The cost of drugs and appliances supplied to the insured came to £2,658,561, an increase of £247,748 over 1910. Payments to hospitals aggregated £2,567,893, or £304,392 more than in the preceding year. Sick pay alone accounted for the huge item of £7,679,148, whereby the increase of £881,507 abundantly reflects the greater incidence in incapacity for work through illness among the insured.

The average expenditure for every insured person for "medical benefit" shows the following comparisons:—

	1911.		1910.	
	s.	*d.*	*s.*	*d.*
Medical attendance	6	2	5	10½
Drugs, &c.	3	11	3	8½
Sick pay	11	3½	10	5
Hospital, &c.	4	11	4	7
	26	3½	24	7

The total costs for each case of illness amount to £3 1*s.* 11*d.*, or to 3*s.* 1½*d.* for every day's illness coupled with incapacity for work. (No statistics are kept of the visits paid to the medical man by the insured in cases where no sick pay is granted.) Of this total per day the remuneration for medical attendance accounted for an expenditure of 9*d.*, and the drugs, &c., for 5½*d.*

For every 100 shillings spent in connexion with medical benefit, the various items included under this title figure in the following proportions: Sick pay, 42·96; medical attendance, 23·43; drugs, &c., 14·87; hospital treatment, 14·37; burial grants, 2·39; maternity benefit, 1·90; and grants to convalescents, 0·08.

CERTIFICATES BY PRACTITIONERS NOT ON THE PANEL.

On March 18th in the King's Bench Division a question of considerable medical importance was decided. The plaintiff, an insured person, asked for a declaration from the court that a resolution passed by his Friendly Society refusing to accept as evidence of incapacity the certificate of any but panel practitioners was illegal, *ultra vires*, and unenforceable. Mr. Justice Bailhache dismissed the action with costs, holding that the matter was one for arbitration.

UNIVERSITY OF LONDON: KING'S COLLEGE.—A series of 20 lectures, each followed by practical work, will be given in the Psychological Laboratory, King's College, Strand, W.C., during the coming summer session, on Psychology for Medical Students and Practitioners, by Dr. William Brown, D.Sc. The syllabus is that for psychology in the examination for the Cambridge Diploma in Psychological Medicine. The fee is £5 5*s.* for the course of lectures and practical work. An introductory lecture will be given on Wednesday, April 23rd, at 4 P.M. Admission free, without ticket.

Medical News.

UNIVERSITY OF BRISTOL.—At the second examination for the degrees of M.B., Ch.B., held recently, the following were successful:—

Hilda Kate Ewins, William George McKenzie, Cedric Norman Valsey, and Guy Richard Penny Wookey.

FOREIGN UNIVERSITY INTELLIGENCE.—*Breslau:* Dr. Henke, professor of pathological anatomy in Königsberg, has been offered the chair of the retiring professor of the same subject, Dr. Ponfick.—*Christiania:* Dr. Nicolai Bull has been appointed Professor of Surgical Diagnosis.—*Königsberg:* Dr. F. B. Hofmann, director of the Physiological Institute of the German University, Prague, has been offered the chair of Physiology, in succession to Dr. Ludimar Herman.—*Lübeck:* Dr. Deycke, senior physician to the Eppendorf Hospital, Hamburg, has been appointed Senior Physician to the General Hospital.—*Marburg:* Dr. Leonhard Jores, director of the Cologne Pathological Institute, has been offered the chair of Pathological Anatomy, in succession to Dr. M. B. Schmidt, who is going to Würzburg.—*Munich:* Dr. C. Schlayer, *privat-docent* of medicine, has been promoted to an Extraordinary Professorship.—*Naples:* Dr. Nicola Monterisi has been recognised as *privat-docent* of Ophthalmology, and Dr. Giuseppe De Luca as *privat-docent* of Otology and Laryngology.—*Paris:* Dr. Hartmann has been appointed to the chair of Clinical Surgery, in succession to the late Dr. Segond.—*Pisa:* Dr. Andrea Borri has been recognised as *privat-docent* of Medical Pathology.—*Prague (Bohemian University):* Dr. Ottokar Srdinko has been promoted to the chair of Histology and Embryology.—*Rostock:* Dr. Hans Hauser has been recognised as *privat-docent* of Midwifery and Gynæcology.

GILCHRIST STUDENTSHIP.—Maud Frances Forrester-Brown, M.B., B.S., London School of Medicine for Women, has been appointed to the Gilchrist studentship for women. It is of the value of £100, tenable for one year by a graduate of the University of London who is prepared to take a course of study in an approved institution in preparation for some profession.

THE IRISH MEDICAL SCHOOLS AND GRADUATES' ASSOCIATION.—The annual festival dinner was held on St. Patrick's Day, March 17th, at the Trocadero Restaurant, London, under the chairmanship of the President, Dr. W. Douglas. The health of "The Guests" was proposed by Dr. H. Macnaughton-Jones, and Judge Rentoul, K.C., the guest of the evening, in reply, humorously referred to his close family connexion with the medical profession. Dr. Alfred Cox, medical secretary to the British Medical Association, submitted the toast of "The Association and the President," and referred to the valuable services of Dr. Douglas.

BIRMINGHAM GENERAL HOSPITAL.—The balance-sheet for last year shows that the total income amounted to £35,106 10*s.* 6*d.* The total expenditure for the year was £30,039 14*s.* 1*d.* The deficit at the end of 1911 (£12,796 0*s.* 8*d.*) was therefore reduced to £7745 9*s.* 4*d.* The report of the board of management states that an arrangement is on trial by which many patients who have been operated upon and who no longer need in-patient treatment but require frequent dressings have been referred to the district nursing societies. The result is that the patients are saved the inconvenience of attending hospital, and the board are not only grateful for the willing help of the societies, but hope for an extension of the system. The board have been much concerned by the notices received of withdrawal of subscriptions in consequence of the passing of the National Insurance Act. As it is clear that the Act does not provide for treatment which it is the proper function of a voluntary hospital to supply, the board hope that those subscribers who have intimated their intention to withdraw their subscriptions will reconsider their decision. The board are further of opinion that there will be no diminution of applicants for admission as in-patients, and any reduction can only be in the minor cases amongst the out-patients, which for years the staff have tried unsuccessfully to refer elsewhere. The number of in-patients last year was 5497, an increase of 245. The daily average was 314·25, an increase of 0·5 daily. Of the in-patients 1003 were children under 12 years of age. The out-patients numbered 67,317, a decrease of 5992. The number of operations performed was 3899.

PLYMOUTH DENTAL HOSPITAL.—The annual meeting of the friends of the Plymouth Dental Hospital was held on March 7th under the presidency of the Mayor. The medical report showed that during 1912 the patients numbered 1826. This hospital has been in existence for over 50 years, and performs much useful work in the "Three Towns," but the financial statement showed that there was an unfavourable balance of £11 at the close of the year. The Earl of Mount-Edgcumbe was re-elected president

LEEDS GENERAL INFIRMARY.—The annual meeting of this institution was held on March 12th, under the chairmanship of the treasurer, Mr. Charles Lupton, who pointed out that, owing to the increased accommodation which the reconstruction rendered necessary by the fire had secured, a greater number of in-patients had been dealt with than in any former year. No less than 8346 patients had been treated in the wards, and of these 7509 had been admitted during the year 1912. He compared these figures with those of some of the other great hospitals of the country. He had again to express regret that the infirmary was unable to cope fully with the large amount of work which was thrust upon it, for during the year there were never fewer than 76 patients waiting for admission, and at one time the number amounted to 458. Mr. Lupton also referred to the work of the out-patient department, especially in relation to the conditions which will arise under the National Insurance Act. Although they had had a larger number of out-patients and casualty patients than ever before, the number of attendances on these out-patients had gone down very considerably. There had been a real difference since the Insurance Act came in, both in casualty cases—particularly in the second attendances of casualty cases—and in the ordinary out-patients. A series of rules was formulated at the beginning of the year to make plain the line to be taken with regard to insured persons. Their effect was that insured persons would not be treated at first at the hospital unless they were found to be suffering from grave complaints. When a panel doctor said a patient was suffering from a complaint which he himself could not treat, whom he wished should be treated by the infirmary, the infirmary would take up his treatment as heretofore. In the course of his interesting speech Mr. Lupton referred to the scheme of extension of the infirmary, which has been described in these columns (THE LANCET, Sept. 14th, 1912, p. 778). The scheme has received the approval of the city council, and they are promoting a Bill in the present session of Parliament which will enable them to secure the necessary property and carry out the proposed diversion of thoroughfares.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Medical Officers of Health (Superannuation) Bill.

SIR PHILIP MAGNUS has presented a Bill in the House of Commons "to provide for superannuation allowances to medical officers of health employed by local authorities and for contributions towards such allowances by those officers and to make other provisions relative thereto." It has been read a first time. The measure is supported by Sir HENRY CRAIK, Mr. LOUGH, Mr. CHARLES BATHURST, Sir HENRY NORMAN, Mr. GODFREY LOCKER-LAMPSON, and Mr. GLYN-JONES.

Dogs (Protection) Bill.

Sir F. BANBURY has reintroduced his Bill in the House of Commons "to prohibit experiments on dogs." It is backed by Mr. GEORGE GREENWOOD.

The Select Committee on Patent Medicines.

The Select Committee of the House of Commons on Patent Medicines has been reappointed. The terms of its reference are "to consider and inquire into the question of the sale of patent and proprietary medicines and medical preparations and appliances, and advertisements relating thereto, and to report what amendments, if any, in the law are necessary or desirable." The membership is as follows: Mr. CHARLES BATHURST, Mr. CAWLEY, Dr. CHAPPLE, Mr. NORMAN CRAIG,

Sir HENRY DALZIEL, Mr. HAYDN JONES, Mr. H. LAWSON, Mr. LYNCH, Mr. HAYDEN, Mr. INGLEBY, Mr. GLYN-JONES, Sir PHILIP MAGNUS, Mr. NEWTON, Sir HENRY NORMAN, and Mr. O'GRADY.

The Debate on the Address.

No discussion on the working of the National Insurance Act took place during the debate on the address. Sir J. D. REES had an amendment on the notice paper expressing regret "that no promise is made of speedy and drastic amendment of the Insurance Act in respect of its compulsory character, the delegation of excessive powers to the Insurance Commissioners, the failure to supply adequate medical attendance at the option of the insured person, the absence of proper provisions for contracting out, and the hardships suffered by married women out-workers in the lace and other industries." It was not moved.

HOUSE OF COMMONS.

WEDNESDAY, MARCH 12TH.

Milk Legislation.

Mr. CHARLES BATHURST asked the Prime Minister whether it was proposed to introduce a Milk and Dairies Bill and carry it through all its stages in both Houses this session.—Mr. ASQUITH answered: The Government hope that it may be possible to carry the Bill this session.

Mr. CHARLES BATHURST: Can the right honourable gentleman say whether this Bill will be the same Bill as was introduced last session?—Mr. ASQUITH: I think so. There may be some slight modifications, but it will be substantially the same Bill.

Migratory Persons and Medical Benefit.

In reply to Mr. INGLEBY, who asked what provisions had been made to afford medical benefit to migratory showmen, Mr. MASTERMAN (Secretary to the Treasury) said: The Insurance Commissioners have recently issued a memorandum pointing out that where insured persons belong to a profession which is constantly moving from one place to another, and stay in each for a very short time, they would appear to be amongst those to whom Section 15 (3) contemplates that permission might, in view of their special circumstances, be given to make their own arrangements for medical attendance and treatment and to receive a contribution towards the cost of the same.

Mr. INGLEBY: Must they make arrangements in every place they visit?—Mr. MASTERMAN: No, they come under the same system as those who make arrangements and receive money towards medical attendance wherever they receive medical attendance.

Mr. J. WARD: Will the right honourable gentleman allow these people at short notice to have medical attendance wherever they happen to be?—Mr. MASTERMAN: It is contemplated that the money will be paid towards medical benefit from the amount available from the funds provided by those who make special arrangements.

Mr. HUNT: Will this apply to people who go to the seaside or go on a visit?—Mr. MASTERMAN: There are special arrangements in connexion with that type of persons, which is a very large type. The matter is being considered by the Insurance Commissioners.

Urgency Calls of Insured Persons.

Replying to Sir J. D. REES, Mr. MASTERMAN said that the initial pressure of registration, selection of insured persons, &c., was now over, and the lists of them were being completed. He knew of no reason to suppose that any greater or other difficulties would arise in the case of insured persons and panel doctors than existed of necessity in the adjustment of different urgency calls between medical men in ordinary practice and patients.

Tuberculous Insured Persons and Tuberculin.

Mr. CHANCELLOR asked the Secretary to the Treasury whether any Regulations had been, or would be, published for the treatment of tuberculous patients under the National Insurance Act; and whether in any Regulations the consent of the patient and also of the patient's doctor would be made obligatory before inoculation with tuberculin was resorted to.—Mr. MASTERMAN wrote in reply: No Regulations have been published on the subject, but it is provided in Section 14 (2) (e) of the Act that no rule made by an Insurance Committee with regard to the administration of sanatorium benefit shall prescribe any penalty, nor shall any insured person be subject to any penalty, whether by suspension of benefit or otherwise, on account of the refusal by any such person to submit to inoculation of any kind.

Research under the National Insurance Act.

Mr. CHANCELLOR asked the Secretary to the Treasury whether any scheme had yet been produced for the expenditure of the sum of 1d. per head to be granted under the National Insurance Act for purposes of research; and, if so, whether such scheme provided, or would provide, that no part of such moneys should be used for experiments on living animals.—Mr. MASTERMAN (in a written answer) replied: The Report of the Astor Committee, which deals with this subject of research, has only just been issued and presented to Parliament. I have not as yet had opportunity adequately to consider its recommendations.

THURSDAY, MARCH 13TH.

The Additional Grants for Medical Benefit.

Mr. CASSEL asked the Prime Minister when it was proposed to introduce the Bill for regularising the additional grants for medical benefit under the National Insurance Act, 1911.—Mr. ASQUITH replied: A Bill is being prepared and it is hoped to introduce it at an early date.

Mr. T. M. HEALY: Will the Bill be confined to this matter or may I express the hope that the right honourable gentleman will not introduce any contentious matter likely to lead to long controversy in Ireland?—Mr. ASQUITH: I do not say that it will be entirely confined to this matter, but I hope it will not be controversial.

Professional Requirements under the National Insurance Act.

Mr. TOUCHE asked the Secretary to the Treasury by what authority the Insurance Commissioners made regulations restricting medical benefit to treatment of a kind which could be undertaken by a practitioner of ordinary professional competence and skill.—Mr. MASTERMAN answered: The Act under Section 15 confers upon an insured person the right to choose from a panel, which any general practitioner may join, the particular medical man from whom he desires to receive medical attendance and treatment. The Commissioners have framed regulations to carry this out by providing that every doctor on the panel shall give to the insured person for whose treatment he is responsible such treatment as is of the kind which can, consistently with the best interests of the patient, be properly undertaken by a general practitioner of ordinary professional competence and skill.

Mr. CASSEL: Is it not the case that Section 8 of the Act is perfectly general in its terms and entitles the insured person to medical treatment and attendance whatever his illness may be, even in cases which require special treatment?—Mr. MASTERMAN: I think that that is rather a question of legal interpretation. I think there is no doubt that the Act clearly sets out in Section 15 that the insured person shall choose his own practitioner to attend upon him, and that practitioner shall give the best attendance he can give.

The Movement of Insured Persons.

Replying to Colonel BURN, Mr. MASTERMAN said: Any insured person who moves from the area of one Insurance Committee to that of another may by giving notice to the Committee of the area into which he moves obtain medical attendance and treatment from a medical man on the panel of the latter area. The Commissioners recently convened a conference of representative doctors from the areas chiefly affected by the influx of insured persons to holiday or health resorts. Steps are being taken to improve the arrangements at present available to meet this class of case.

Colonel BURN: Does the right honourable gentleman not think that some special arrangements or regulations may be necessary in order to meet cases which are continually happening in seaside resorts where people go to recuperate after illness?—Mr. MASTERMAN: I am considering the way in which further regulations may be necessary. I can assure the honourable and gallant gentleman that we are very carefully considering the question. It is a difficult one, and I shall be glad if he can contribute any suggestion towards its solution.

Mr. H. LAWSON: Have any arrangements even of a temporary character been made in view of the Easter holidays?—Mr. MASTERMAN: The present arrangements are quite clear as they stand under the regulations, but I am not sure that they provide for satisfactory working as a permanent system for the doctors in those resorts, and that is what I am considering.

Dr. CHAPPLE: Could the right honourable gentleman not arrange to allow them to change from one panel or doctor's list to another?—Mr. MASTERMAN: I am not sure that that would be a permanent solution of the problem.

Free Choice of Medical Man.

Mr. HICKS BEACH asked the Secretary to the Treasury whether he was aware that the Insurance Commissioners had decided that those insured persons who were exercising their right of a free choice of doctor and had made private arrangements with doctors off the panel were not entitled to receive medicine free from chemists on the panel; whether he was aware that such persons were paying from their own sources for the services of these doctors; and could he state under what section of the National Insurance Act Parliament decided that insured persons who chose to exercise the right of a free choice of doctor would have to pay both for doctor and medicine from private sources and continue to pay their usual contributions under the Act for benefits which included both doctor and medicine.—Mr. MASTERMAN (by written answer) replied: Under Section 15 (3) of the National Insurance Act, and under the Regulations made by the Commissioners in accordance with the provisions of that Section of the Act, the Insurance Committee may allow insured persons in certain circumstances and under certain conditions to make their own arrangements for receiving medical attendance and treatment (including medicines and appliances), and in such cases the Committee must contribute towards the cost of medicines as well as attendance.

Sanatorium Benefit at Eastbourne.

Mr. RUPERT GWYNNE asked the Secretary to the Treasury what provision had been made for the accommodation of insured persons requiring sanatoria treatment from Eastbourne; how many beds had been retained; how many persons had applied for such treatment; how many had been accommodated; and at what distance from the town was the sanatorium to which patients had been sent or offered to be sent.—Mr. MASTERMAN furnished the following written reply: Arrangements are made as occasion requires for the accommodation in existing sanatoria of insured persons recommended for such treatment. Out of 25 applications for sanatorium benefit from insured persons 12 were recommended by the medical adviser for treatment in sanatoria. Of these, two have been accommodated at St. Leonards-on-Sea and six at Nayland, Colchester, two were considered unfit to travel, one was considered an unsuitable case by the institution, and the remaining patient is being sent to Nayland.

Burials and National Insurance in Ireland.

Sir JOHN LONSDALE asked the Secretary to the Treasury whether he was aware that the National Health Insurance Commission (Ireland) held that it had no power to authorise the payment of the expense of the removal of the dead body of a patient sent by an Insurance Committee to a sanatorium and dying while under treatment, and that in the case of many patients this would mean their burial as paupers; and whether the Government would empower the Insurance Commission to authorise the payment of the expenses of removal in the event of the death of destitute patients.—Mr. MASTERMAN wrote in reply: I am advised that the expenses of removal or of burial of a dead body cannot be regarded as part of the expenses of sanatorium treatment, and that the Commissioners have no power to authorise Insurance Committees to defray such expenditure out of their funds.

Naval Hospital Ship.

Mr. CHURCHILL (First Lord of the Admiralty) informed Mr. BURGOYNE that a suitable ship for hospital service had been purchased from the mercantile marine, and would be fitted out at one of His Majesty's dockyards.

Medical Degrees of Naval Volunteer Reserve Officers.

Sir PHILIP MAGNUS asked the Secretary to the Admiralty whether the authorities of the Admiralty refused to give the same recognition to the Master of Surgery degree of the London University and to the corresponding degrees of the Oxford and Cambridge Universities as

they gave to the M.D. degree; and whether they declined, and if so why, to allow surgeons in the Royal Naval Volunteer Reserve to have the degree of M.S. inserted after their names in the Navy List, whereas they permitted the degree of M.A., M.D., and M.B. to be so inserted.—Mr. MACNAMARA answered: Instructions will be given that in future issues of the Navy List the letters M.S. shall be inserted after the names of medical officers of the Royal Naval Volunteer Reserve who hold the degree of Master of Surgery.

Small-pox amongst Crew of H.M.S. Conqueror.

Replying to Mr. BENTHAM, Mr. MACNAMARA wrote: A careful inquiry has been made respecting the contracting of small-pox by three members of the crew of H.M.'s ship *Conqueror*. It is impossible definitely to arrive at any conclusion as to the origin of the disease.

Conscientious Objectors to Vaccination.

In answer to Mr. J. PARKER, Mr. BURNS (President of the Local Government Board) said: The number of conscientious declarations to vaccination received by vaccination officers during the first six months of 1912 is 136,335. The approximate number for the whole year is 276,000.

Town Planning Schemes.

Mr. LEACH asked the President of the Local Government Board how many schemes for town planning had been sanctioned under the Town Planning Act and how many more were under consideration.—Mr. BURNS replied: I have sanctioned the preparation of 30 schemes by 24 local authorities, and four of these schemes have been made by the local authorities and submitted to me for approval. I also have under consideration applications for authority to prepare 13 other schemes by 12 local authorities. The area of the lands included in the above schemes exceeds 60,000 acres. In addition about 100 other cases have been brought to my notice in which the local authorities were considering the question of preparing schemes, and there are no doubt many other authorities who are contemplating schemes, but who have not yet found it necessary to communicate with me on the subject.

Mr. LEACH asked how many houses had been condemned under the Town Planning Act.—Mr. BURNS replied: The latest figures in my possession show that up to March 31st last 15,350 houses were made the subject of closing orders by local authorities under the Housing and Town Planning Act, 1909, but a large number of these houses were subsequently made fit for habitation. The number of insanitary houses or houses not reasonably fit for habitation which have been made fit for habitation as a result of procedure under Sections 15 and 17 of the Act of 1909 is approximately 67,000.

A Suggested Alternative to Forcible Feeding.

Mr. KING asked the Secretary of State for the Home Department whether he was aware of recent pathological experiments, made on patients incapable of taking food, which tended to establish the fact that dugong oil, if persistently rubbed into the pores of the skin daily, would keep the patient alive for several weeks, and whether he would use this method of treatment as an alternative for the forcible feeding of prisoners.—Mr. MCKENNA replied: I am informed that cod-liver oil has been frequently applied by inunction to infants to combat malnutrition, but with very doubtful success. In any case, the prolongation of life by this means would be very limited.

Mr. KING: Is the right honourable gentleman aware that since I put this question on the paper I have received letters from gentlemen attributing the saving of their lives to this process?—Mr. MCKENNA: I can quite understand that to be the case, but it would only be possible to adopt this practice where the feeding was required as a temporary process. In the prison cases it would hardly be sufficient.

Mr. CATHCART WASON: Has dugong anything to do with cod?—Mr. MCKENNA: I have replied with regard to cod-liver oil. The process would be the same.

Care and Control of the Feeble-minded in Scotland.

Mr. MCKINNON WOOD (Secretary for Scotland) informed Mr. DUNCAN MILLAR that he proposed to introduce a separate Bill for Scotland dealing with the care and control of the feeble-minded in that country.

BOOKS, ETC., RECEIVED.

ARNOLD, EDWARD, London.

Malingering and Feigned Sickness. By Sir John Collie, M.D., J.P., Medical Examiner, London County Council; Chief Medical Officer, Metropolitan Water Board; assisted by Arthur H. Spicer, M.B., B.S. Lond., D.P.H. Price 10*s.* 6*d.* net.

Diabetes: its Pathological Physiology. By John J. R. Macleod, M.B., Ch.B., D.P.H., Professor of Physiology, Western Reserve University, Cleveland, O., U.S.A. Price 10*s.* 6*d.* net. (International Medical Monographs. General Editors: Leonard Hill, M.B., F.R.S., and William Bulloch, M.D.)

Tabular Diagnosis. An Aid to the Rapid Differential Diagnosis of Diseases. By Ralph Winnington Leftwich, M.D., late Assistant Physician to the East London Children's Hospital. Price 7*s.* 6*d.* net.

Electro-therapeutics for Practitioners. By Francis Howard Humphris, M.D. Brux., F.R.C.P. Edin., M.R.C.S. Eng., L.R.C.P. Lond., L.M. (Rot., Dublin), President of the American Electro-therapeutic Association. Price 8*s.* 6*d.* net.

BALE (JOHN), SONS, AND DANIELSSON, LIMITED, London.

University Reform for the Royal Medical Colleges and Reformed Adages. By H. Elliot-Blake, M.R.C.S. Eng., L.R.C.P. Lond., Member and Licentiate of the Apothecaries Society of London. Price 11*s.* net.

Nerve Aggregation (An Important Neuropathic Standpoint) and Medical Free Paths (Armamentaria, &c.). By H. Elliot-Blake, M.R.C.S. Eng., L.R.C.P. Lond., Member and Licentiate of the Apothecaries Society of London. Price 11*s.* net.

BAILLIÈRE, TINDALL, AND COX, London.

Bad Kissingen as a Health Resort. By A. Rosenau, M.D. Würzburg, L.R.C.P. Lond., Physician at Bad Kissengen. Price not stated.

CHURCHILL, J. AND A., London.

Vicious Circles in Disease. By Jamieson B. Hurry, M.A., M.D. Cantab., ex-President, Reading Pathological Society. Second and enlarged edition. Price 7*s.* 6*d.* net.

FISCHER, GUSTAV, Jena.

Ueber die Wirkung der Struktur auf chemische Vorgänge in Zellen. Von Dr. med. et phil. Otto Warburg, Privatdozent der Physiologie an der Universität Heidelberg. Price Pf. 60.

Hanbuch der pathogenen Mikroorganismen. Herausgegeben von Dr. W. Kolle und Dr. A. von Wassermann. Zweite vermehrte Auflage. Lieferungen 32, 33, 34, und 35. Price M. 5 each.

FROWDE, HENRY (OXFORD UNIVERSITY PRESS), London, Edinburgh, New York, Toronto, Melbourne, and Bombay.

English Cookery Books to the Year 1850. By Arnold Whitaker Oxford, M.A., M.D. Price 5*s.* net.

LEMCKE AND BUECHNER, 32, West 27th Street, New York City.

Cardio-vascular Diseases. Recent Advances in their Anatomy, Physiology, Pathology, Diagnosis, and Treatment. By Thomas E. Satterthwaite, A.B., M.D., LL.D., Sc.D. Price not stated.

LIVINGSTONE, E. AND S., Edinburgh.

Modern Wound Treatment and the Conduct of an Operation. By Sir George T. Beatson, K.C.B., B.A. Cantab., M.D. Edin. Price 2*s.* net.

METHUEN AND CO., LIMITED, London.

Health Through Diet. A Practical Guide to the Uric-acid-free Diet. By Kenneth G. Haig, L.R.C.P. Lond., M.R.C.S. Eng., with the advice and assistance of Alexander Haig, M.A., M.D. Oxon. Price 3*s.* 6*d.* net.

OPHTHALMOSCOPE PRESS, THE (GEORGE PULMAN AND SONS, LIMITED), Thayer-street, London, W.

Eye-strain in Everyday Practice. By Sydney Stephenson, M.B., C.M. Edin., D.O. Oxon., F.R.C.S. Edin., Ophthalmic Surgeon to the Queen's Hospital for Children, London; Editor of "The Ophthalmoscope." Price 3*s.* 6*d.* net.

THACKER, SPINK, AND CO., Calcutta.

Labour-room Clinics. Being Aids to Midwifery Practice. By Captain V. B. Green-Armytage, M.D., I.M.S., Resident Surgeon, Eden Hospital, Calcutta. Price R. 1.8.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

DYSON, WILLIAM, M.D. Vict., has been appointed Honorary Assistant Physician to the Manchester and Salford Hospital for Skin Diseases.

EVANS, D. GORDON, M.B., B.S. Lond., has been appointed Assistant Resident Medical Officer at the Queen Alexandra Sanatorium, Davos Platz, Switzerland.

GRAVES, T. C., B.Sc., M.B., B.S., has been appointed Obstetric Assistant at University College Hospital.

MACGILLYCUDDY, A. E. N., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon at University College Hospital.

SANDISON, ALEXANDER, M.B., B.C., Cantab., B.Sc. Lond., has been appointed Medical Officer to the Tuberculosis Dispensary for the County Borough of Croydon.

STALKER, W. STEWART, M.D. Glasg., D.P.H., has been appointed Medical Officer of Health and School Medical Officer for the Urban District of Swinton and Pendlebury, Manchester.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ANTRIM COUNTY COUNCIL.—Tuberculosis Medical Officer. Salary £500 per annum.

BARNSTAPLE, NORTH DEVON INFIRMARY.—House Surgeon. Salary £100 per annum, with board, residence, and washing.

BETHLEM HOSPITAL.—Two Resident House Physicians, unmarried, for six months. Salary at rate of £25 each per quarter, with board, residence, and washing.

BIRMINGHAM, RUBERY HILL ASYLUM.—Junior Assistant Medical Officer. Salary £150 per annum, with apartments, board, and washing.

BLACKBURN COUNTY BOROUGH.—Medical Officer of Health and School Medical Officer. Salary £750 per annum.

BOLINGBROKE HOSPITAL, Wandsworth Common, S.W.—House Surgeon for six months. Salary £75 per annum, with board, residence, and laundry.

BOURNEMOUTH, ROYAL NATIONAL SANATORIUM FOR CONSUMPTION, —Resident Medical Officer. Salary £200 per annum, with board, residence, and washing.

BRENTFORD UNION INFIRMARY, WORKHOUSE, AND SCHOOLS.—Second Assistant to Medical Superintendent. Salary £140 per annum, with apartments, rations, &c.

BRIDGWATER HOSPITAL.—House Surgeon, unmarried, for six months. Salary at rate of £100 per annum, with board, lodging, and washing.

BRIGHTON, ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, Dyke-road.—House Surgeon for six months. Salary at rate of £80 per annum, with board, lodging, and washing.

BRIGHTON, ROYAL SUSSEX COUNTY HOSPITAL.—Assistant House Surgeon, unmarried. Salary £80 per annum, with apartments, board, and laundry. Also Assistant House Surgeon, unmarried, for Septic Block. Salary £80 per annum, with apartments, board, and laundry.

BRISTOL EYE HOSPITAL.—House Surgeon. Salary £80 per annum with board, residence, and laundry.

BRISTOL GENERAL HOSPITAL.—Honorary Physician or Surgeon to Throat and Nose Department. Also Assistant Anæsthetist.

BRISTOL ROYAL INFIRMARY.—Obstetric and Ophthalmic House Surgeon for six months. Salary at rate of £75 per annum, with board, laundry, and apartments.

BUXTON, DEVONSHIRE HOSPITAL, Derbyshire.—Assistant House Physician for six months. Salary £100 per annum, with apartments, board, and laundry.

CANTERBURY BOROUGH ASYLUM.—Assistant Medical Officer, unmarried. Salary £160 per annum, with board, lodging, washing, and attendance.

CARDIFF, KING EDWARD VII.'s HOSPITAL.—House Surgeon or House Physician for six months. Salary £30, with board, residence, and laundry.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—House Physician. Salary £80 per annum, with board, apartments, and laundry.

DARLINGTON HOSPITAL AND DISPENSARY.—House Surgeon, unmarried. Salary £120 per annum, with board, lodging, and laundry.

DARTFORD, DARENTH INDUSTRIAL COLONY, Kent.—Third Assistant Medical Officer, unmarried. Salary £150 per annum, with board, lodging, and washing.

DOUGLAS, NOBLE'S HOSPITAL, Isle of Man.—Resident House Surgeon, unmarried. Salary £90 per annum, with board and washing.

DUDLEY, GUEST HOSPITAL.—Assistant House Surgeon for six months. Salary £100 per annum, with residence, board, and washing.

DUNDEE, CITY OF.—Tuberculosis Medical Officer. Salary at rate of £500 per annum.

DUNDEE ROYAL INFIRMARY.—Anæsthetist and Instructor in Anæsthetics in the University of St. Andrews. Salary £200 per annum.

DURHAM COUNTY COUNCIL.—Deputy and Assistant County Medical Officer of Health. Salary £400 per annum.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, London, S.E.—Clinical Assistants.

GRAVESEND HOSPITAL, Kent.—House Surgeon. Salary £100 per annum, with board and residence.

GRIMSBY AND DISTRICT HOSPITAL.—Junior House Surgeon. Salary £80 per annum, with board, lodging, attendance, and washing.

GUILDFORD, ROYAL SURREY COUNTY HOSPITAL.—House Surgeon. Salary £75 per annum, with board, residence, and laundry.

HALIFAX, ROYAL HALIFAX INFIRMARY.—Third House Surgeon, unmarried. Salary £80 per annum, with residence, board, and washing.

HEMEL HEMPSTEAD, HERTS, WEST HERTS HOSPITAL.—Resident Medical Officer. Salary £100 per annum, with rooms, board, and washing.

IPSWICH, EAST SUFFOLK HOSPITAL.—Senior House Surgeon. Salary £100 per annum, with board, residence, and laundry.

KEIGHLEY AND BINGLEY FEVER HOSPITAL AND SANATORIUM, Morton Banks, Keighley.—Female Resident Medical Officer. Salary £125 per annum, with residence, board, and laundry.

KENSINGTON AND FULHAM GENERAL HOSPITAL, Earl's Court, S.W.—Resident Medical Officer. Salary at rate of £75 per annum, with board and laundry.

LEAMINGTON SPA, WARNEFORD, LEAMINGTON, AND SOUTH WARWICKSHIRE GENERAL HOSPITAL AND MIDLAND COUNTIES BATHING INSTITUTION.—House Surgeon and House Physician. Salary £100 and £85 respectively, with board, residence, and laundry.

LEICESTER ROYAL INFIRMARY.—Assistant House Surgeon for six months. Salary at rate of £30 per annum, with board, apartments, and washing.

LIVERPOOL, COUNTY ASYLUM, Rainhill.—Assistant Medical Officer, unmarried. Salary £150 per annum, with apartments, board, attendance, and washing.

LIVERPOOL INFIRMARY FOR CHILDREN.—Two Resident House Physicians and Resident House Surgeon, all for six months. Salary £30 in each case, with board and lodging.

LONDON LOCK HOSPITAL, Harrow-road, Paddington, W.—Assistant House Surgeon. Salary £80 per annum, with board, lodging, and washing.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Assistant Resident Medical Officer for six months. Salary £40, with board and residence. Also Medical Registrar. Salary at rate of 40 guineas per annum.

MANCHESTER, VICTORIA UNIVERSITY.—Lecturer in Diseases of Children. Also Lecturer in Diseases of the Skin.

MIDDLESEX HOSPITAL, W.—Medical Registrar.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon. Salary £170. Also Resident and Assistant Resident Surgeons for Branch. Salaries £180 and £170 per annum respectively, with apartments, attendance, light, and fuel.

NOTTINGHAM WORKHOUSE AND INFIRMARY.—Two Assistant Resident Medical Officers. Salary £150 per annum, with apartments, board, attendance, and washing.

OLDHAM ROYAL INFIRMARY.—Third House Surgeon in Ophthalmic, Casualty, and Out-patients' Departments for six months. Salary at rate of £80 per annum, with residence, board, and laundry.

PARISH OF PADDINGTON.—Medical Superintendent of the Infirmary and Medical Officer of the Workhouse. Salary £400 per annum, with house, washing, &c.

PRESTON, COUNTY ASYLUM, Whittingham.—Assistant Medical Officer, unmarried. Salary £150 per annum, with board, apartments, and washing.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney-road.—House Physician for six months. Salary at rate of £80 per annum, with board, residence, and washing.

READING, ROYAL BERKSHIRE HOSPITAL.—Second House Surgeon for six months. Salary £80 per annum, with apartments, board, and washing.

ROCHDALE INFIRMARY.—Junior House Surgeon, unmarried. Salary £80 per annum, with board, residence, and laundry.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House Surgeon. Salary £80 per annum, with board, lodging, and washing.

ROYAL LONDON OPHTHALMIC HOSPITAL, City-road, E.C.—Third House Surgeon for eight months. Salary at rate of £50 per annum, with board and residence.

ROYAL NAVAL MEDICAL SERVICE.—Twenty-five appointments.

ST. PAUL'S HOSPITAL FOR SKIN AND GENITO-URINARY DISEASES, Red Lion-square, W.C.—Honorary Assistant Surgeon.

SALOP COUNTY COUNCIL.—Tuberculosis Medical Officer. Salary at rate of £400 per annum.

SAMARITAN FREE HOSPITAL FOR WOMEN, Marylebone-road, N.W.—Surgeon to Out-patients. Also Medical Registrar.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Junior House Surgeon for six months. Salary £80 per annum, with board, residence, &c.

SEAMEN'S HOSPITAL SOCIETY, Greenwich, S.E.—DREADNOUGHT HOSPITAL, Greenwich: Assistant Pathologist to the Hospital and School. Salary £100 per annum, with lunch and tea. Also Two House Physicians and Two House Surgeons, all for six months. Salary in each case £50 per annum, with board, residence, and washing. ALBERT DOCK HOSPITAL, Connaught-road, E.: Senior House Surgeon. Salary £100 per annum, with board, residence, and washing. Also House Surgeon. Salary £50 per annum, with board, residence, and washing.

SHEFFIELD, JESSOP HOSPITAL FOR WOMEN.—Assistant House Surgeon, unmarried. Salary £60 per annum, with board, residence, and laundry.

SHEFFIELD ROYAL HOSPITAL.—Assistant House Physician, unmarried. Salary £80 per annum, with board, lodging, and washing.

SHEFFIELD ROYAL INFIRMARY.—Ophthalmic House Surgeon, Aural House Surgeon, and Assistant House Physician, all unmarried. Salary £70 each per annum, with board and residence.

SHEFFIELD UNION HOSPITAL, Firvale.—Resident Assistant Medical Officer. Salary £120 per annum, with apartments, rations, &c.

SHREWSBURY, SALOP COUNTY AND WENLOCK BOROUGH LUNATIC ASYLUM, Bicton Heath.—Medical Superintendent. Salary £650 per annum, with house, fuel, light, &c.

SOUTHAMPTON, FREE EYE HOSPITAL.—House Surgeon. Salary £100 per annum, with board, lodging, and laundry.

SOUTHAMPTON, ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House Surgeon for six months. Salary at rate of £60 per annum, with rooms, board, and washing.

SOUTH SHIELDS, INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Senior and Junior House Surgeons. Salaries £100 and £90 per annum respectively, with residence, board, and washing.

STIRLING DISTRICT ASYLUM, Larbert, N.B.—Third Assistant Medical Officer (female). Salary £100 per annum, with board, &c.

STROUD GENERAL HOSPITAL.—House Surgeon. Salary £100 per annum, with board, lodging, and washing.

SUNDERLAND, ROYAL INFIRMARY.—Junior House Surgeon for six months. Salary £80 per annum, with board, residence, and laundry.

SUNDERLAND, ROYAL INFIRMARY CHILDREN'S HOSPITAL.—Resident Medical Officer for six months. Salary £80 per annum, with board, residence, and laundry.

TALGARTH, BRECON AND RADNOR ASYLUM, Breconshire.—Assistant Medical Officer, unmarried. Salary £200 per annum, with quarters, board, attendance, and laundry.

TAUNTON, SOMERSET AND BATH ASYLUM, Cotford.—Assistant Medical Officer, unmarried. Salary £150 per annum, with apartments, board, washing, attendance, &c.

UNIVERSITY COLLEGE HOSPITAL, Gower-street, W.C.—Tuberculosis Officer.

WEST AFRICAN MEDICAL STAFF.—Appointments. Salary £400 per annum.

WEST HAM AND EASTERN GENERAL HOSPITAL.—Junior House Surgeon. Salary at rate of £75 per annum, with board, residence, and washing.

WEST LONDON HOSPITAL AND POST-GRADUATE COLLEGE, Hammersmith-road, W.—Clinical Assistants.

WEST RIDING OF YORKSHIRE.—Tuberculosis Officers. Salary £400 per annum.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Surgeon. Salary £100 per annum, with board, rooms, and laundry.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of a vacancy for a Certifying Surgeon under the Factory and Workshop Acts at Newbury, in the county of Berks.

New Addresses.

POWELL, LLEWELYN, 10, Duke-street Mansions, Grosvenor-square, W. Telephone: 87 Mayfair.

THE SOCIETY OF AUTHORS (INCORPORATED), 1, Central Buildings, Tothill-street, Westminster, S.W. Rooms 30, 31, and 87.

A fee of 2s. 6d. is charged for the insertion of Notices of Change of Address, which must not exceed two lines.

Births, Marriages, and Deaths.

BIRTHS.

ASHWIN.—On March 11th, at Waldyve House, Market Weighton, the wife of Dr. Richard Hamilton Ashwin, of a son.

CLARK.—On March 13th, at 2, Spital-square, Bishopsgate, E., the wife of Percy J. Clark, M.R.C.S., L.S.A., of a daughter.

DEATHS.

BILLINGS.—On March 11th, at New York, John Shaw Billings, M.D., D.C.L. Oxon., Colonel U.S. Army, retired, aged 76.

TANNAHILL.—At Gibraltar, on the 9th inst., John Roy Tannahill, M.B., Ch.B. Edin., eldest son of J. A. Tannahill, Greenock.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

OFFENSIVE WINDOW DISPLAYS.

IT is surely time that something was done to stop drug stores in main streets from putting stacks of vaginal syringes in prominent places in their shop windows, often with notices and pictures calling attention to these ugly wares. The practice has, of course, spread from the furtive little shops in city by-streets which deal in "rubber goods" and obscene literature. The object of these syringes is well known to most men and women of the world, and it is disgusting that appliances of that sort should be flaunted before decent people. But the main reason why such window displays should be suppressed is not an æsthetic but a moral one; children are not fools, and they are not blind, and it is clearly undesirable that the shop window should force things upon their notice which it is better for them to know nothing about. No doubt there are difficulties in the way of police interference, because it can be pleaded that the use of these articles is not self-evident and that their aim is innocent. Perhaps it is only to public opinion that we can look for a remedy, and it is for that reason that we have laid stress upon the fact that many of these vulgar shops are now in well-frequented streets. Granted that a dirty thing is as dirty in an alley as in a thoroughfare, it remains a fact that in the latter position it can do more harm. When neighbouring shop-keepers recognise that proximity to such offensive displays is detrimental to themselves the remedy should be at hand.

A NEW MICROMETER EYEPIECE.

Mr. Carl Metz, of 18, Bloomsbury-square, W.C., has submitted to us a new micrometer eyepiece, a magnified view of the scale of which is shown in the illustration. The usual eyepiece micrometer has very fine lines, and with some objects it is difficult to see them under unfavourable conditions of lighting. During prolonged observations with an eyepiece micrometer this is very fatiguing and apt to strain the eye. This defect is particularly pronounced when an object and a micrometer scale are seen by dark-ground illumination. Indeed, in a dark-ground field the micrometer scale may refuse to come into view. Mr. Metz's so-called micrometer eyepiece provides a simplified method of taking micrometric measurements and does away with all arithmetical calculations. The intervals of the micrometer are arranged in groups of ten, each group being indicated by a black echelon rising from the first to the tenth interval. This arrangement possesses the great advantage that the divisions can always be seen distinctly whether the objects be light or comparatively dark. The intervals of the scale, instead of being 1/10 or 1/20 mm. wide, as is usually the case in eyepiece micrometers, have a definite value of 0·06 mm. The object of this departure is to obtain for each objective and for a given tube-length convenient, and in the majority of cases integral, micrometer values which greatly facilitate the use of the instrument. The actual tube-length differs in most cases but little from the standard-length. To demonstrate the simplicity of the method and the degree of accuracy to which the step-micrometer lends itself the following examples are given by the inventor. The object selected was a valve of Surirella Gemma; its length was measured first by an eyepiece micrometer of the usual type and then by the step-micrometer. 1. Leitz objective ¼", possessing micrometer value 0·00349 mm., length of valve 30·9 intervals of the scale, therefore $30·9 \times 0·00349 = 0·1078$ mm. = 107·8 μ. With the step-micrometer the value of the same objective is 2 μ at a mechanical tube-length of 178 mm., the valve covers 53·8 intervals of the scale, therefore $53·8 \times 2 = 107·6$ μ. 2. Leitz objective $\frac{1}{12}$" oil immersion, micrometer value = 0·00164 mm., length of valve 65·5 intervals of scale, therefore $0·00164 \times 65·5 = 0·1074$ mm. = 107·4 μ. With the step-micrometer the same objective possesses a micrometer value of 1 μ at a mechanical tube-length of 168 mm., the value covers 107·5 intervals of the scale, therefore $107·5 \times 1 = 107·5$ μ.

The step-micrometer is mounted on the diaphragm of the eyepiece and can be sharply focussed with the eye-lens, which is mounted in a sliding sleeve. The device is made by E. Leitz, Optical Works, Wetzlar.

INSURANCE INFORMATION.

MEDICAL men, doubtless, often require to obtain, for their own use or that of their patients statistical, financial, and other information concerning insurance offices, either in comparison or individually. In such a case The *Insurance Register* (*Life*) for 1913 (London: Charles and Edwin Lytton. Pp. 152. Price 1s.) will afford them a directory of British, Colonial, and American life and annuity offices and reversionary companies, with valuation, premium, interest tables, and so forth.

Dr. J. Fehrsen.—We understand the word "prescription" to mean the written formula given by the medical practitioner to the patient or the pharmacist. We should not apply it to the bottle of medicine or the box of pills dispensed from that formula. But we believe the word prescription is sometimes used colloquially to mean the actual remedy prescribed, and our correspondent would be well advised to ask the authorities for a definition.

Disappointed.—Unfortunately no general expression of opinion covers the position in all circumstances or in all localities. Our correspondent is requested to send full particulars.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

THE following Congresses, Conferences, and Exhibitions are announced for 1913:—

March 25th (Berlin).—Twelfth Congress of the German Association for Orthopædic Surgery.
" 26th–29th (Berlin).—Forty-second Congress of the German Surgical Association.
" 26th–30th (Berlin).—Fourth International Congress for Physio-therapy.
" 29th and 30th (Berlin).—Ninth Congress of the German Roentgen Society.
April 3rd–9th (London).—International Congress of Historical Studies.
" 6th–12th.—Health Week.
" 15th–18th (Wiesbaden).—Congress of Internal Medicine.
" 22nd–25th (London, Horticultural Hall).—Nursing Conference and Exhibition.
" 26th (Ghent) (opens).—International Exhibition.
May 15th–18th (Paris).—Twenty-first Annual Congress of the Royal Institute of Public Health.
May–October (Leipzig).—First International Building Exhibition.
June 24th–27th (London, Ontario).—Canadian Medical Association.
July 7th–12th (Exeter).—Twenty-eighth Congress of the Royal Sanitary Institute.
" 16th–18th (Oxford, Keble College).—Oxford Ophthalmological Congress.
" 22nd–25th (Brighton).—Eighty-first Annual Meeting of the British Medical Association.
Aug. 4th and 5th (London, Caxton Hall).—English-speaking Conference on Infant Mortality.
" 6th–12th.—(London).—Seventeenth International Congress of Medicine.
" 20th–26th (Ghent).—Third International Congress of Neurology and Psychiatry.
Sept. 2nd–6th (Groningen).—International Physiological Congress.
" 9th–13th (Vienna).—Second International Congress of Life Saving and Prevention of Accidents.
" 10th–17th (Birmingham).—British Association.
" 22nd–28th (Milan).—Fourteenth International Anti-alcoholic Congress.
September (Vienna).—Second International "First Aid" Congress.
(London).—Historical Medical Exhibition. (Organised by Mr. Henry S. Wellcome.)
(Chicago).—Congress of the International Association of Refrigeration.
(Washington).—Congress of American Physicians and Surgeons.
(Paris).—Congress of Physical Education.
(Paris).—Congress of the Royal Institute of Public Health.
(Buffalo).—Fourth International Congress of School Hygiene.
In 1914:—
Aug. 10th–15th (St. Petersburg).—Twelfth International Congress of Ophthalmology.
(Vienna).—Third International Congress for Professional Diseases.
(Auckland, N.Z.).—Australasian Medical Congress.
(St. Petersburg).—Third Mendeléeff Congress of Pure and Applied Chemistry and Physics.
(Washington, D.C.).—International Congress of Americanists.
(London).—International Dental Congress.
(Paris).—Fourth International Medical Congress on Industrial Accidents.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, March 18th, 1913.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Mar. 12	30·35	S.E.	...	89	55	39	39	42	Fine
" 13	30·03	S.	...	64	56	41	41	41	Foggy
" 14	29·87	S.W.	0·03	62	54	41	49	50	Raining
" 15	29·98	W.	0·06	90	49	40	40	43	Cloudy
" 16	29·83	W.	0·08	87	46	41	40	42	Overcast
" 17	29·23	S.W.	0·55	77	44	39	38	39	Overcast
" 18	29·78	N.	0·10	56	40	32	31	33	Fine

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street, W.

FRIDAY.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN (Hon. Secretaries—H. S. Clogg, F. Langmead, P. N. Blake-Odgers): at 4.30 P.M.

Dr. F. J. Poynton: (1) An Interesting Cardiac Irregularity in an Infant; (2) A Case of Rheumatic Carditis commencing in Very Early Life.

Dr. Langmead: (1) A Case of Congenital Tremor; (2) Case of Defective Ossification of the Cranial Vault.

Dr. Crookshank and Mr. Sidney Boyd: Congenital Deficiency of the Chest-wall.

And other Cases.

HUNTERIAN SOCIETY, St. Bartholomew's Hospital (Library), E.C.

WEDNESDAY.—9 P.M., Discussion on the Uses of Tuberculin (opened by Dr. A. Latham). The following gentlemen will take part:—Dr. N. Bardswell (Midhurst): (1) The Value of Subcutaneous Tuberculin in Diagnosis; (2) The Value of Tuberculin in Clearing the Sputum of Tubercle Bacilli. Dr. G. A. Crace-Calvert (Ruthin): Tuberculin in Pulmonary Tuberculosis. Dr. A. M. N. Pringle (Ipswich): Optimum and Maximum Dosage. Dr. J. N. Griffiths: Treatment at a Tuberculin Dispensary. Dr. J. W. Linnell: Use in Pulmonary Tuberculosis from the Clinical Aspect.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Diseases of the Skin

WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. Bishop Harman: Diseases of the Eye. Dr. Simson: Diseases of Women.

THURSDAY.—2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye.

FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Diseases of the Skin.

SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. Bishop Harman: Diseases of the Eye. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

CANCER HOSPITAL, Museum of the Hospital, Fulham-road, S.W.

WEDNESDAY.—5 P.M., Mr. A. Leitch: Laboratory Diagnosis of Cancer (illustrated by cases and microscopic and other specimens).

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.

Course of Lecture-Demonstrations on Diseases of the Chest, with Special Reference to Tuberculosis (including a Tuberculin Course):—

THURSDAY.—4.30 P.M., Dr. Drysdale.

FRIDAY.—4.30 P.M., Dr. Bryett.

LONDON HOSPITAL MEDICAL COLLEGE (UNIVERSITY OF LONDON), London Hospital, Mile End-road, E.

Course of Lectures and Demonstration on Neurology (illustrated with Clinical Cases):—

WEDNESDAY.—4.30 P.M., Dr. G. Holmes: Mid-Brain and Optic Thalamus.

FRIDAY.—4.30 P.M., Dr. H. Head: Muscular Atrophy.

For further particulars of the above Lectures, &c., see Advertisement Pages.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. II. of 1912 were given in THE LANCET of Dec. 28th, 1912.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1912 are now ready. Bound in cloth, gilt lettered, price 16*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, London, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

THE COLONIAL AND FOREIGN EDITION (printed on thin paper) is published in time to catch the weekly Friday mails to all parts of the world.

The rates of subscriptions, post free from THE LANCET Offices, have been reduced, and are now as follows:—

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 1 0	One Year	£1 5 0
Six Months	0 12 6	Six Months	0 14 0
Three Months	0 6 6	Three Months	0 7 0

(The rate for the United Kingdom will apply also to Medical Subordinates in India whose rates of pay, including allowances, is less than Rs.50 per month.)

Subscriptions (which may commence at any time) are payable in advance. Cheques and Post Office Orders (crossed "London County and Westminster Bank, Covent Garden Branch") should be made payable to the Manager, Mr. CHARLES GOOD, THE LANCET Offices, 423, Strand, London, W.C.

TO COLONIAL AND FOREIGN SUBSCRIBERS.

SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE.

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied.

SOLE AGENTS FOR AMERICA—MESSRS. WILLIAM WOOD AND CO., 51, Fifth Avenue, New York, U.S.A.

The following journals, magazines, &c., have been received:—

Biometrica, University College Union Magazine, Revue de Gynécologie et de Chirurgie Abdominale, St. Paul Medical Journal, Indian Medical Journal, Indian Medical Record, Man, La Clinique Infantile, Canadian Journal of Medicine and Surgery, American Journal of Surgery, Archives de Médecine et de Pharmacie Militaires, Tropical Diseases Bulletin, Archives of Diagnosis, Maryland Medical Journal, Clinical Medicine, China Republican, Hospital Gazette, Symons's Meteorological Magazine, South African Medical Record

Communications, Letters, &c., have been received from—

A.—Messrs. Allen and Hanburys, Lond.; Ardath Tobacco Co., Lond.; Antrim County Council, Belfast, Secretary of; Mr. H. B. Angus, Newcastle-on-Tyne; Argyll Milling Co., Glasgow; Mr. A. Abercromby, Lond.; Dr. R. G. Alexander, Halifax; Argus Suisse de la Presse, Geneva; Aberdeen University Press, Aberdeen.

B.—Bowerman's Press, Ltd., Lond.; Bootham Park Mental Hospital, York, Clerk to the; Messrs. Blades, East, and Blades, Lond.; *Birmingham Daily Post*, Manager of; *Birmingham Medical Review*, Editor of; Dr. J. M. Bruce, Lond.; Mr. F. A. Brockhaus, Lond.; Messrs. Bedford and Co., Lond.; Mr. E. Baker, Birmingham; Dr. R. P. Ballard, Bradford; Mr. Alfred Backhaus, Lond.; Barnstaple, Medical Officer of Health of; Dr. Dudley Buxton, Lond.; British Museum (Natural History), Lond., Director of; Dr. W. Broughton-Alcock, Paris; Bristol General Hospital, Secretary of; Dr. W. H. Bishop, Wylam; Bolingbroke Hospital, Lond., Secretary of; Borough Asylum, Canterbury, Clerk to the; Brecon and Radnor Asylum, Talgarth, Clerk to the; Birkenhead Borough Hospital, Secretary of; Sir H. Beevor, Bart., Attleborough; Miss B. Bristow, High Wycombe; Mrs. A. Bell, Southbourne-on-Sea.

C.—Mr. H. A. Collins, Croydon; Messrs. T. Christy and Co., Lond.; County Asylum, Whittingham, Superintendent of; Messrs. J. and A. Churchill, Lond.; Dr. W. A. Clarke, Vancouver; City of London Asylum, Dartford, Medical Superintendent of; City of London Hospital for Diseases of the Chest, Secretary of; Mr. W. H. Clayton-Greene, Lond.; Sanitätsrat Dr. Eugen Cohn, Berlin; Mrs. Ethel Crozier, Hastings; C. H.; Mr. Martin F. Cusack, Lond.; Co-operative Sanatoria, Billericay; Dr. H. Warren Crowe, Yelverton; Dr. Myer Coplans, Leeds.; Cambridge University Press, Lond.

D.—Messrs. W. Dawson and Sons, Lond.; Dr. J. P. Duncan, Glasgow; Darlington Hospital, Secretary of; Mr. H. Dickinson, Lond.; Dr. F. d'Hollander, Mons; Dr. Binnie Dunlop, Lond.; Dr. J. Lawson Dick, Lond.; Mr. R. Donald, Lond.; Dr. Constantin Daniel, Bucharest.

E.—Mr. A. R. Elliott, New York; Mr. F. W. Edridge-Green, Lond.; Dr. J. Eyre, Lond.; Dr. W. Engelmann, Bad Kreuznach; Dr. T. Johnston English, Lond.

F.—Dr. M. Fazly, Constantinople; Messrs. Fannin and Co., Dublin; Messrs. J. S. Fry and Sons, Bristol; Dr. J. Fehrsen, Pretoria; Dr. T. Carson Fisher, Torquay; Francis Galton Laboratory, Lond.; Factories, Chief Inspector of, Lond.; Free Eye Hospital, Southampton, Hon. Secretary of; Messrs. Ferris and Co., Bristol; Fleet Publicity Co., Lond.

G.—Dr. E. A. Gates, Florence; Dr. S. Nicol Galbraith, Lond.; Dr. W. C. Gavin, Buckland Newton; Glasgow, Corporation of; General Register Office, Dublin; General Medical Council, Lond., Registrar of; Grimsby and District Hospital, Secretary of; Mr. G. H. Gemmell, Edinburgh; Messrs. Gould and Portman, Lond.; Fleet-Surgeon H. W. Gordon-Green, R.N., Pembroke; Mr. A. Hill Griffith, Manchester; Dr. H. M. W. Gray, Aberdeen.

H.—Mr. J. S. Hill, Aspatria; Mr. H. E. Haynes, Brentwood; Messrs. Hastings Bros., Lond.; Messrs. C. Hearson and Co., Lond.; H. G.; Mr. J. R. Hayman, Bury St. Edmunds; Professor W. D. Halliburton, Lond.; Dr. Charles F. Harford, Lond.; Dr. John Hay, Liverpool; Hunterian Society, Lond., Senior Hon. Secretary of; Dr. Wilfred Harris, Lond.; Dr. L. Harris-Liston, Middleton St. George; Professor F. Hobday, Lond.; Hempsons, Lond.; Harveian Society of London, Hon. Secretary of; Dr. F. de Havilland Hall, Lond.; Messrs. S. Hildesheimer and Co., Lond.

I.—Messrs. Ingram and Royle, Lond.; Dr. A. C. Inman, Lond.

J.—Mr. R. T. Jones, Harlech; Professor Robert Jardine, Glasgow; Dr. F. Johnson, Worthing; Jessop Hospital for Women, Sheffield, Secretary of; Jeyes' Sanitary Compounds Co., Lond.

K.—Dr. Klein, Lond.; Messrs. Kenrick and Jefferson, West Bromwich, Manager of; Mr. C. T. Kingzett, Lond.; King Edward VII.'s Hospital, Cardiff, Secretary of; Mr. K. S. Krikorian, Beirut; Mr. W. B. Kebble, Lond.; Messrs. James Keith and Blackman Co., Lond.

L.—Mr. H. K. Lewis, Lond.; Messrs. G. N. Lennox, Cardiff; Messrs. Lee and Nightingale, Liverpool; Leeds Corporation, Clerk to the; Mr. E. Leitz, Lond.; London News Agency, Lond.; Leicester Royal Infirmary, Board of Governors of.

M.—Mr. C. MacMahon, Lond.; Manchester Medical Agency, Secretary of; Messrs. Mather and Crowther, Lond.; Messrs. C. Mitchell and Co., Lond.; Mr. R. W. Murray, Liverpool; Maltine Manufacturing Co., Lond.; Mr. R. Mosse, Berlin; Major H. M. Mackenzie, I.M.S., Bahawalpur; Mr. A. Maude, Westerham; Mr. F. Maxsey, Alderney; Dr. Charles Mercier, Parkstone; Staff-Surgeon J. St. John Murphy, R.N., Devonport; Dr. J. D. Macfie, Chelmsford.

N.—Mr. H. Needes, Lond.; Nottingham Guardians, Clerk to the; Nosehaler Co., Lond.; National Labour Press, Lond., Manager of; Nottingham Medico-Chirurgical Society, Secretary of; Nottingham Hospital and Dispensary, Secretary of; North Riding Infirmary, Middlesbrough, Secretary of; North Devon Infirmary, Barnstaple, Secretary of.

O.—Mr. S. Osborn, Datchet.

P.—Messrs. Peacock and Hadley, Lond.; Mr. P. Pohlenz, Carlsbad; Dr. F. J. Poynton, Lond.; Messrs. Partridge and Love, Bristol; Dr. Pini, Milan; Dr. Arthur H. Priestley, Norwich; Messrs. Philip Bros., Herne Bay; Dr. E. H. A. Pask, Cheltenham; *Prescriber*, Edinburgh, Manager of; Poplar Dispensary, Chairman of; Mr. J. Herbert Parsons, Lond.

R.—Mr. T. W. H. Robson, Southampton; Royal National Sanatorium for Consumption, Bournemouth, Secretary of; Registered Nurses' Society, Lond., Secretary of; Royal Dental Hospital, Lond., Secretary of; Royal Portsmouth Hospital, Secretary of; Royal College of Physicians of Ireland, Dublin, Registrar of; Rockefeller Institute for Medical Research, New York; Miss C. M. Wheeler Ryan, Birkenhead; Dr. Harold Rischbieth, Adelaide; Royal South Hants and Southampton Hospital, Secretary of; Royal Medical Benevolent Fund, Lond., President and Committee of; Royal Microscopical Society, Lond., Secretaries of; Royal Society, Lond.

S.—Messrs. Spottiswoode and Co., Lond.; St. George's Union, Lond., Clerk to the; Stroud General Hospital, Secretary of; Messrs. G. Street and Co. Lond.; Sheffield Union, Clerk to the; Messrs. Schimmel and Co., Lond.; Sunderland Royal Infirmary, Secretary of; Messrs. W. H. Smith and Son, Liverpool; Smith's Advertising Agency, Lond.; Mr. P. Schmidt, Basle; Messrs. Spiers and Pond, Lond.; Miss M. S. P. Strangman, Waterford; Sir George Savage, Lond.; Messrs. W. B. Saunders Co., Lond.; Dr. C. F. Stovin, Ilford; Dr. J. P. Steele, Florence; Dr. Charles Slater, Lond.; Professor W. Stirling, Manchester; St. Ives Urban Sanitary Authority, Medical Officer of.

T.—Dr. W. Templeton, Doncaster; Messrs. W. Thacker and Co., Lond.; Dr. John Tatham, Lynton; Mr. G. S. Thompson, Kimberley; Dr. J. Tremble, East London; Messrs. Berry Tompkins and Co., Lond.

U.—United Press Syndicate, Calcutta, Manager of.

W.—Messrs. Wander, Lond.; Dr. R. Stenhouse Williams, Reading; West Herts Hospital, Hemel Hempstead, Clerk to the; *Western Morning News*, Barnstaple; Wolverhampton General Hospital, Secretary of; Mr. H. Beckwith Whitehouse, Birmingham; Mr. H. Lloyd Williams, Lond.; West London Medico-Chirurgical Society, Hon. Secretary of; Mr. Charles Walker, Glasgow; Messrs. Woollam and Richards, Shrewsbury; Dr. W. Essex Wynter, Lond.; Dr. L. Waldstein, Tunbridge Wells; Willenhall Urban District Council, Medical Officer of Health of; Messrs. John Wright and Sons, Bristol.

Z.—Dr. P. Zanotti, Bologna.

Letters, each with enclosure, are also acknowledged from—

A.—Ashwood House, Kingswinford, Medical Superintendent of; Agricultural College, Aspatria, Principal of.

B.—Dr. W. L. Burgess, Lond.; Burntwood Asylum, Lichfield, Medical Superintendent of; British Thomson-Houston Co., Lond., Manager of; Mr. H. B. Bramley, New Brighton; Dr. N. Bradly, Claughton; Dr. J. O. Wakelin Barratt, Liverpool; Mr. P. W. Broom, Lond.

C.—Messrs. T. Craven and Sons, Manchester; C. W. W.; Cardiff Corporation, Treasurer to the; Miss H. B. Curragh, Par; Consumption Sanatorium of Scotland, Bridge of Weir, Secretary of.

D.—Lieutenant-Colonel Davies, R.A.M.C., Eltham; Rev. E. Daniel, Mannargudi.

E.—Mr. B. Evans, Felinfach.

F.—Mrs. E. L. Forward, Nottingham; F. W. P.

G.—Mr. W. H. George, Kelvedon; Dr. A. C. Geddes, Dublin; Dr. M. H. Gordon, Lond.

H.—Messrs. A. Heywood and Son, Manchester; Messrs. Hassenstein and Vogler, Lond.; Harley Institute, Lond., Manager of; Mr. J. Hoole, Parwich.

I.—Dr. N. Instone, Lond.; Dr. P. R. Ingram, Lond.; Ingham Infirmary, South Shields, Secretary of; Dr. S. T. Irwin, Belfast.

J.—J. E. T.

K.—Messrs. C. Knight and Co., Lond.

L.—Sir H. B. Longhurst, Lond.; Mr. T. S. Logan, Exminster; London Temperance Male and Female Nurses' Co-operation, Secretary of; Mr. C. C. Lord, Gillingham.

M.—Medical Correspondence College, Lond., Secretary of; Mr. T. O. Milne, Lond.; Messrs. Macmillan and Co., Lond.; Dr. J. J. McGrath, Dunfanaghy; Mr. J. D. Murdoch, Klipdam; Messrs. Meister, Lucius, and Brüning, Lond.

N.—New South Wales Government Offices, Lond., Secretary of; North Staffs Infirmary, Stoke-on-Trent, Secretary of; Northern Medical Association, Glasgow, Secretary of.

P.—Dr. C. Ponder, Maidstone; Dr. E. Patteson, Lond.; Dr. F. C. H. Piggott, Teignmouth; Dr. H. F. Parsons, Croydon.

R.—Dr. Reynolds, Lond.; Messrs. Richardson and Co., Lond.; Reuter's Telegram Co., Lond., Secretary of; Royal Victoria Hospital, Dover, Secretary of; Dr. Reynolds, Edinburgh.

S.—Messrs. W. H. Smith and Son, Lond.; S. A. M.; S. P. Charges Co., St. Helens; Dr. W. C. Sullivan, South Leverton; Dr. J. E. H. Sawyer, Birmingham; Messrs. Schaerer and Co., Lond.

T.—Dr. J. B. R. Thomas, Pontycymmer; Dr. A. Tuxford, Boston; Mr. P. R. Tarbet, Lond.; Mr. L. Tattersall, Clayton-le-Moors; Taunton and Somerset Hospital, Secretary of; Dr. N. Tattersall, Neath.

V.—Mr. V. Vesselovsky, Lond.

W.—Mr. L. E. Barrington Ward, Lond.; W. J. B.; W. A. M.; Dr. J. H. D. Webster, Colwyn Bay; West Riding County Council, Wakefield, Treasurer to the; Mr. H. E. Worthington, Birchington.

Z.—Messrs. C. Zimmermann and Co., Lond.

EVERY FRIDAY.

THE LANCET.

PRICE SIXPENCE.

SUBSCRIPTION, POST FREE.

FOR THE UNITED KINGDOM.*		TO THE COLONIES AND ABROAD.	
One Year	£1 1 0	One Year	£1 5 0
Six Months	0 12 6	Six Months	0 14 0
Three Months	0 6 6	Three Months	0 7 0

* *The same rate applies to Medical Subordinates in India.*

Subscriptions (which may commence at any time) are payable in advance.

ADVERTISING.

Books and Publications	Five Lines and under £0 4 0
Official and General Announcements	
Trade and Miscellaneous Advertisements and Situations Vacant ...	Every additional Line 0 0 6

Situations wanted: First 30 words, 2s. 6d.; per additional 8 words, 6d.
Quarter Page, £1 10s. Half a Page, £2 15s. An Entire Page, £5 5s.
Special Terms for Position Pages.

Cheques and Post Office Orders (crossed "London County & Westminster Bank, Covent Garden Branch") should be made payable to the Manager Mr. CHARLES GOOD, THE LANCET Office, 423, Strand, London, to whom all letters relating to Advertisements or Subscriptions should be addressed.
THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.